VOL. 74 NO. 7

L.U.N.C.
Commerce F. R.

The views of two Burlington Mills Corp. officers, Chairman J. Spencer Love (Page 37) and President J. C. Cowan (P. 42), are published in this issue.

textile bulletin

JULY • 1948

AUG 2

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Quality for Economy

JACOBS Reinforced "Verybest"

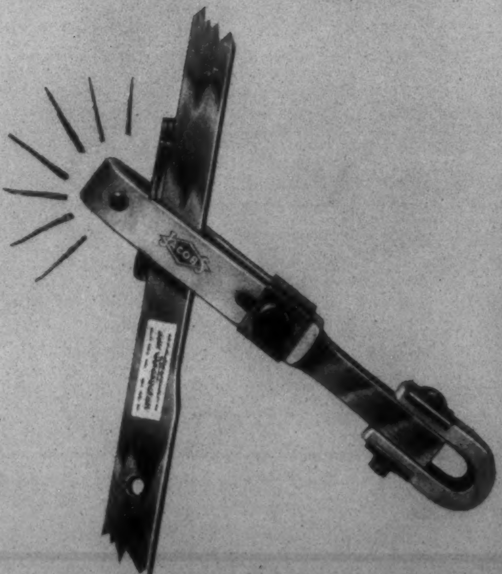
Lug Straps

Reinforced where reinforcement is needed. Especially developed for modern loom speeds.

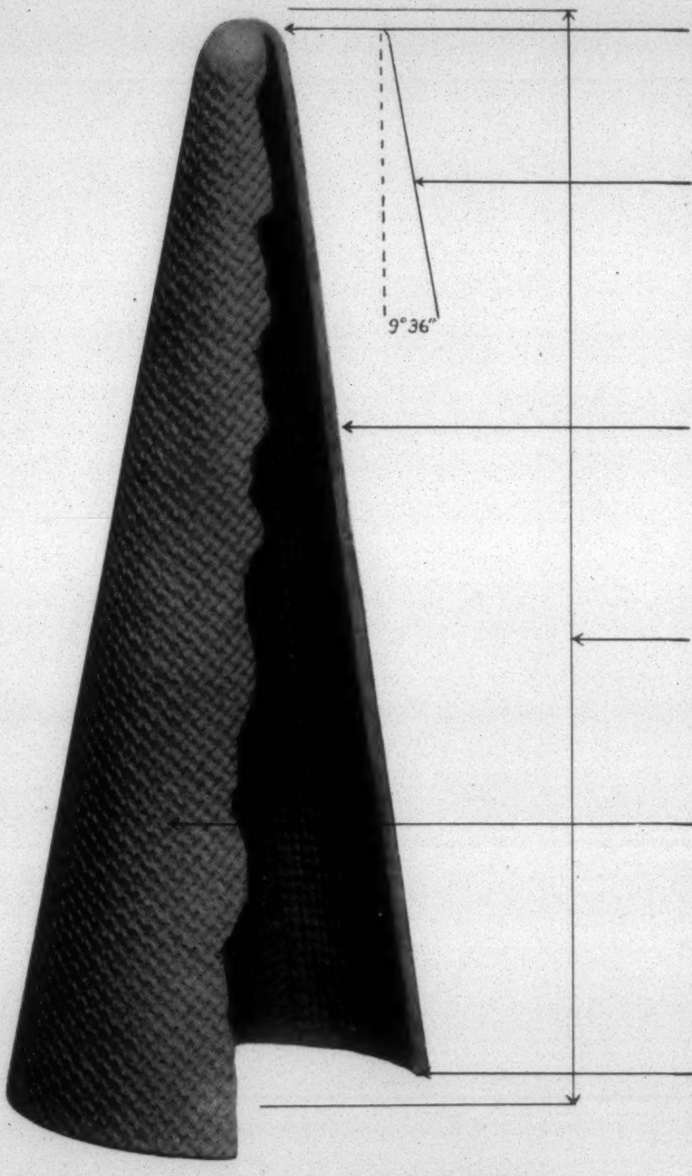
PLYWELD Picker Sticks

Give better loom boxing of the shuttle. Increase production — cut operating costs.

E. H. JACOBS NORTHERN DIVISION
The Bullard Clark Company
DANIELSON, CONNECTICUT



Do You Know These Facts About a SONOCO Cone



The NOSE—Various types have been perfected . . . Open—closed—round—straight—polished—lacquer tipped . . . all developed to prevent roughness that will snag the yarn upon delivery.

The TAPER—From 3° 30'' to 9° 36'' depending on use and type of winding equipment. Rayon cones are usually either 3° 30'' or 5° 57' (12—E). A special tire cord cone is 3° 51'. Heavy yarns, however, usually take a steep taper such as 7° 10', 8° 14', 9° 15'. Hosiery yarns use 9° 15' and 9° 36'.

The WEIGHT—Cone weights are based on pounds per 1000. SONOCO cones are available in light, medium and heavy weights depending on the strength desired. The weights, determined by wall thickness and size, range from 43 pounds per 1000 to 210 pounds per 1000.

The LENGTH—Any length is available in most cones. Certain standards are practiced, however, in certain type cones. Most lengths are between 5¾'' to 7''. SONOCO makes cones 9¼'' and 10½'' long.

The SURFACE—A wide cone surface range is available from smooth to deep corrugated, plus scoring. Depending on the yarn, surfaces have been developed—all velvet on smooth or corrugated paper finish—velvet bands on smooth paper finish—flocked finish on smooth paper—deep corrugated or medium corrugated.

INSIDE DIAMETER at BASE An accurate dimension to insure exact seating position of cone on winding mandrel and to permit package build-up on center of cone.

Further specifications can include colored paper, colored lacquer or stained tips, printing—either inside or outside, visible-run-out bands, special treatments for toughness, waterproofing, mildew, acid or alkali resistance, and perforating for package dyeing. Truly—"A SONOCO Cone for Every Purpose," is a statement that only SONOCO can make.

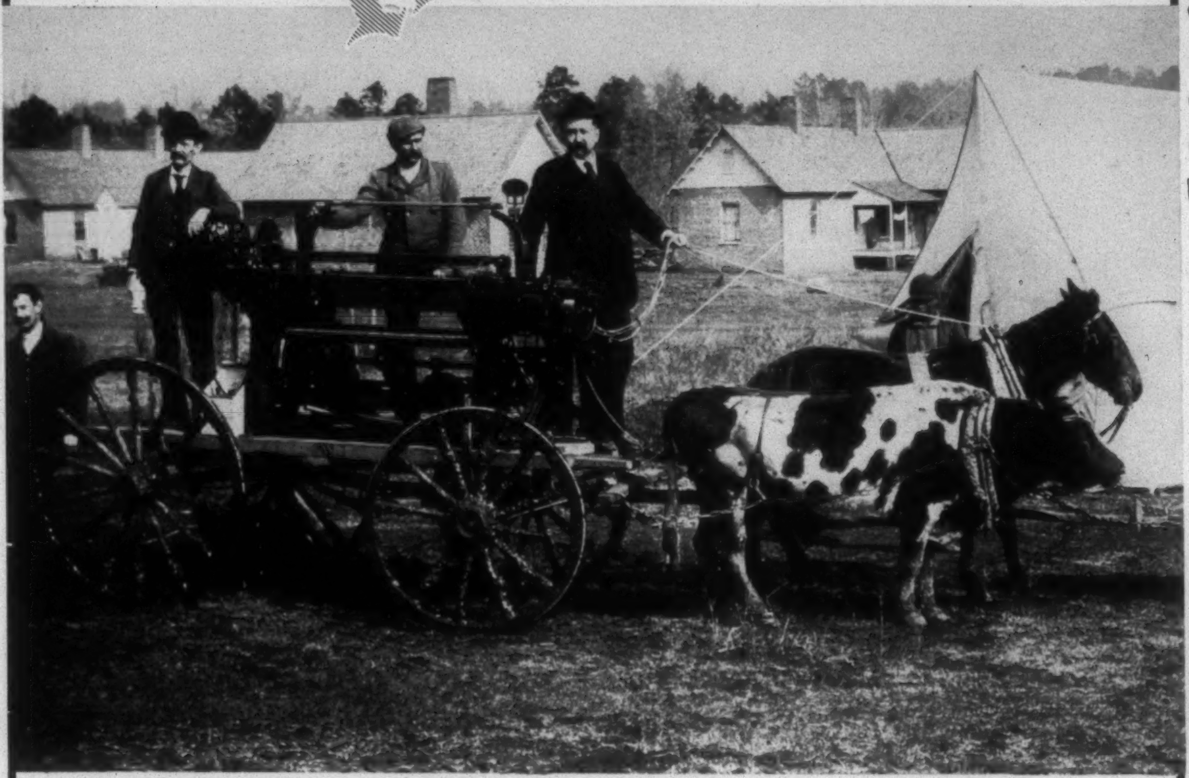
SONOCO PRODUCTS COMPANY

BRANTFORD ONT. HARTSVILLE S. C. MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

SONOCO SERVES THE WORLD PAPER CARRIERS REG. U.S. PAT. OFF.

in 1896



When goods were transported by ox cart instead of by high speed motor van, one of the most progressive mills of the day received the new Draper Automatic Loom pictured above. They had become convinced of the practicability of this radically different Loom. The report that a Weaver could tend 16 instead of 4 appealed to them as a practical way of weaving more cloth at less cost.

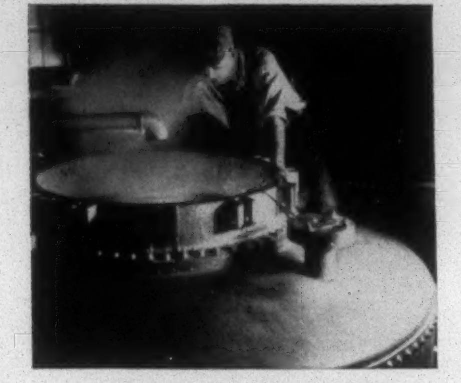
Today, with Weavers running 100 looms on many cotton weaves, and up to 50 on rayon weaves, the Draper Loom is still the most productive and the most economical.

Established
1816

Draper Corporation

Incorporated
1916

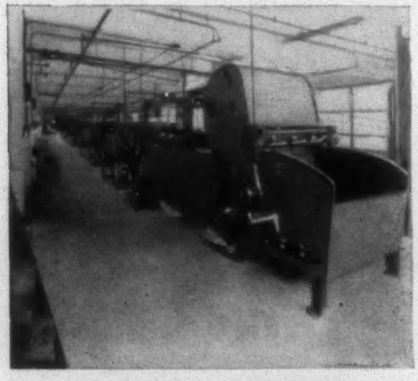
HOW THESE OPERATIONS CAN GIVE YOU THESE RESULTS



KIER-BOILING OF COTTON

Clean, Absorbent Cottons

After weaving, grey goods are kier boiled with caustic soda under pressure for 8-12 hours to remove gums, waxes, pectins and motes. The ideal soap for this job is Armour's CERTIFIED—because CERTIFIED provides more rapid penetration into the fiber and better emulsifying properties. CERTIFIED, a vegetable fatty acid base soap, not only loosens dirt thoroughly—but also holds it in suspension until these impurities can be flushed away. Results: soft, clean absorbent fabrics ready for subsequent bleaching, dyeing and finishing operations.



RAW WOOL SCOURING

Soft, Lofty Wool

Raw wool is scoured to emulsify and carry away the natural grease and foreign matter on the wool. Since scouring is done at 115-120° F., the soap used should have a low-titer for ready solubility and rinsability. Armour's TEXSCOUR is your answer! TEXSCOUR forms a grease emulsion which can be broken down readily to reclaim the lanolin—and yet the emulsion is tight enough to carry away the grease and dirt. Besides, TEXSCOUR, a red oil base soap in flake form, exerts a buffering action on the wool and gives a softness to the hand which synthetics do not permit.

PACKAGE DYEING OF YARNS

Even, Uniform Dyeing

In package dyeing, the dye solution must penetrate rapidly, thoroughly and give the same shade to the inside as to the outside of the package of yarn. So in this case you need a synthetic detergent with high wetting and penetrating properties rather than a soap with high detergency. You need Armour's No. 412 REGAL Detergent. No. 412 gives you the powerful penetration required to prevent channeling of the solution and to provide ready access of the dye to all parts of the package. No. 412 is completely stable and effective under all dyeing conditions for all types of fibers.

Remember, There are Armour Soaps and Synthetic Detergents
to Solve All Your Textile Problems.

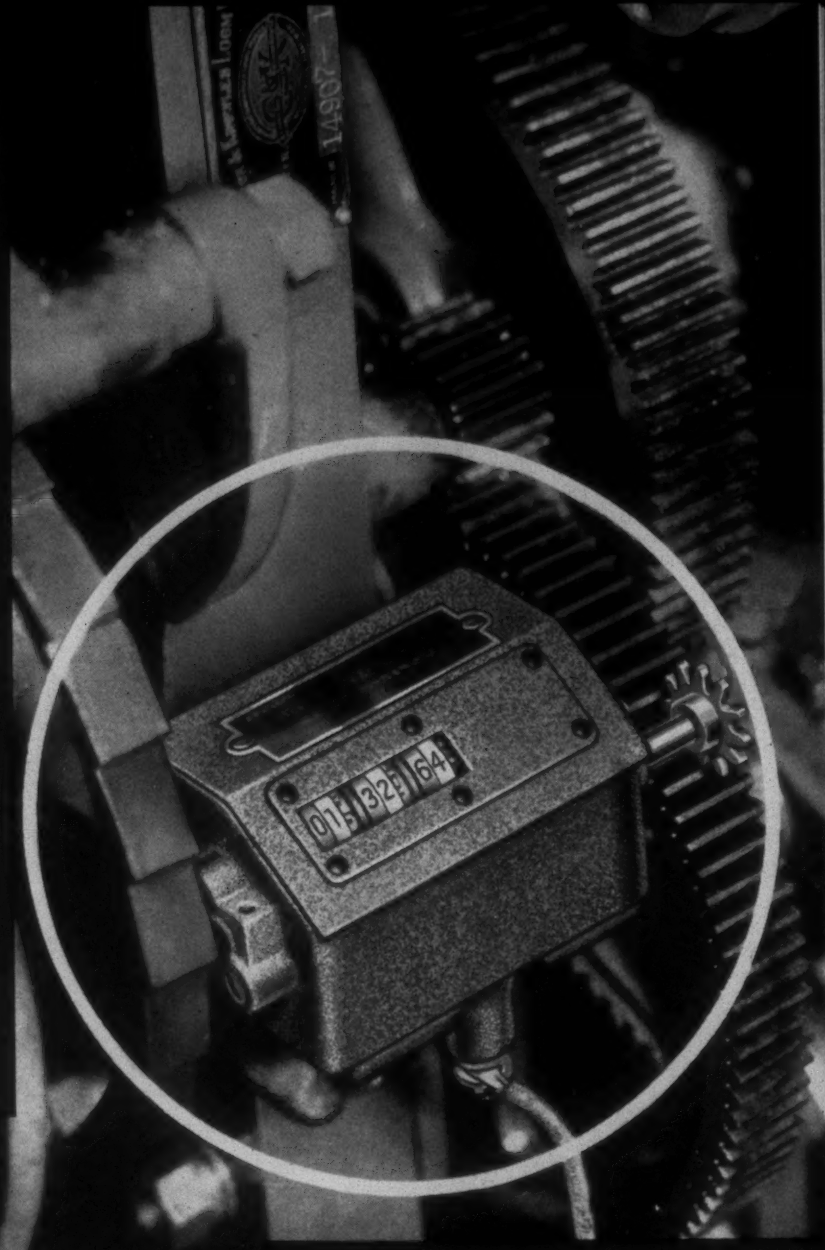
ARMOUR and Company

Industrial Soap Division

1355 WEST 31ST STREET • CHICAGO 9, ILLINOIS

On ALL your Looms . . .
get these

6 Vantage-Points of VEEDER-ROOT CUT METERS



1. **UNIFORM CUTS** — The Veeder-Root Cut Meter records directly in yards or meters . . . controls cut lengths from looms . . . automatically knocks loom off at desired length, within reasonable tolerances.
2. **CUT MARKS ELIMINATED** — No need to put in cut marks at the slasher. No need to remove cut marks in finishing.
3. **AID TO WEAVER'S EFFICIENCY** — No need for weaver to watch for cut marks. No double cuts due to weaver missing cut marks.
4. **INVENTORY CONTROL** — A reading of the Cut Meter on each loom provides a check, at any time, on work in process.
5. **CUSTOMER SATISFACTION** — Demands of converters are satisfied by the assurance of uniform cuts.
6. **FINISHING CONTROL** — Uniform cuts are extremely helpful in controlling some types of subsequent finishing operations.

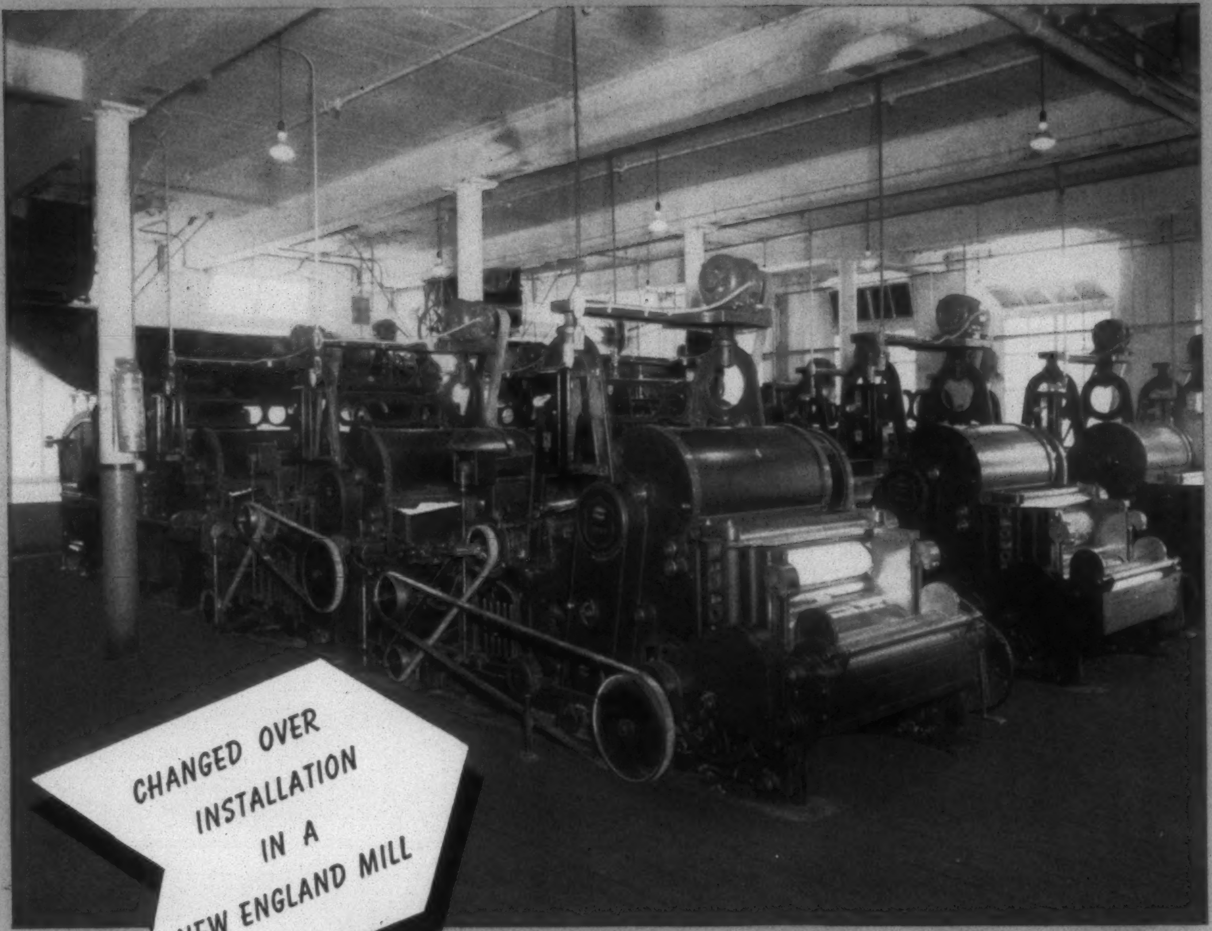
Add these 6 Vantage-Points of Veeder-Root Cut Meters to the 14 Vantage-Points of Veeder-Root 2–3 Pick Counters . . . *on every loom in your weave room.* Get in touch with your nearest Veeder-Root office *now.*

VEEDER-ROOT INC.
HARTFORD 2, CONNECTICUT · GREENVILLE, SO. CAROLINA
In Canada: Veeder-Root of Canada, Ltd., 995 St. James Street, Montreal 3
In England: Veeder-Root Ltd., Dickinson Works, 20 Purley Way, Croydon, Surrey

Veeder-Root Counters

for Every
[illegible]

H&B ONE-PROCESS PICKERS



CHANGED OVER INSTALLATION IN A NEW ENGLAND MILL

The picker installation shown above is a good example of how old, 2 or 3 process H & B pickers can be changed over to modern one-process efficiency.

This change-over is accomplished at minimum expense by the addition of parts which effectively combine previously separate units into one continuously operating machine.

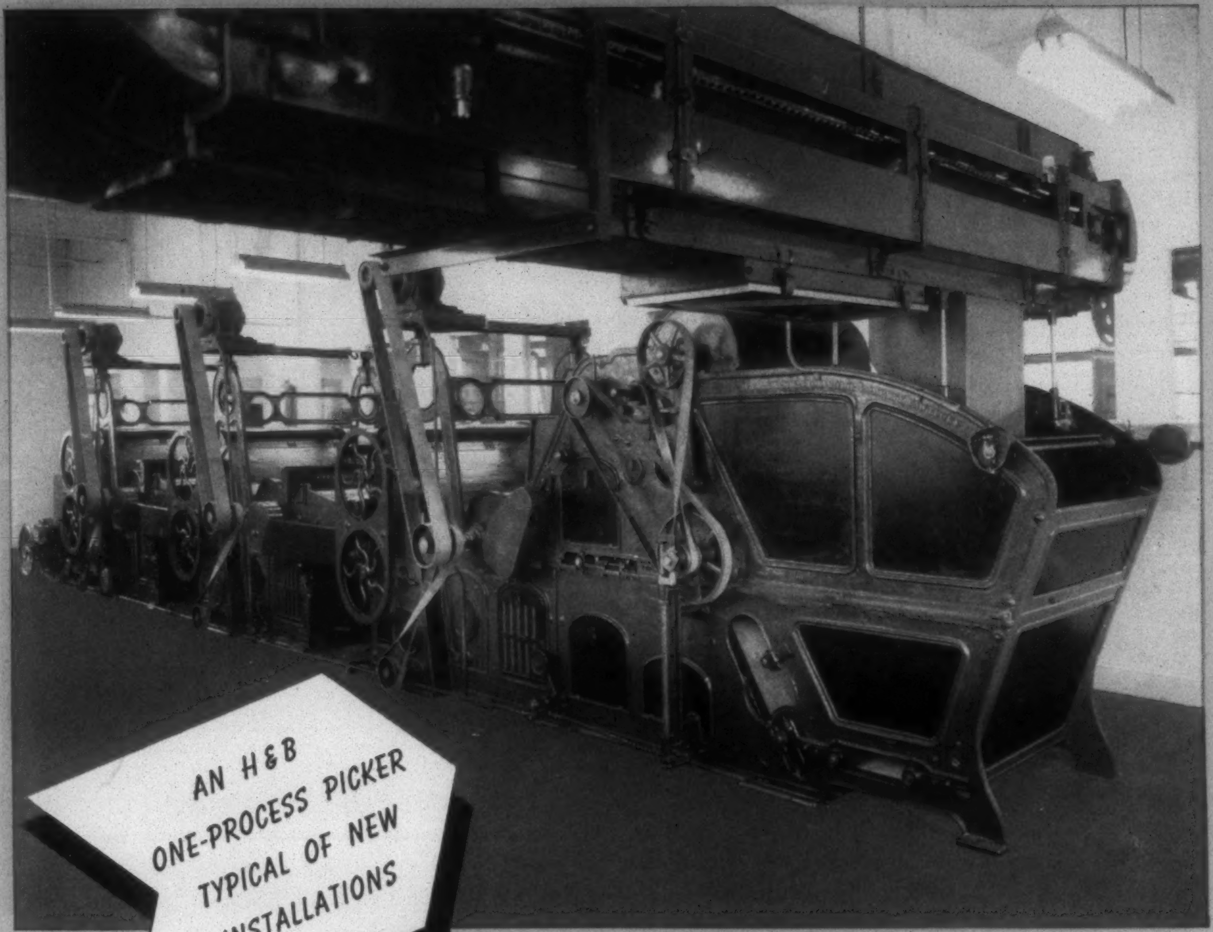
The resulting reduction of labor costs, increased production and more even laps, more than pay for the modernization after a short period of operation.

H&B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

. . . . NEW AND CHANGED OVER



AN H&B ONE-PROCESS PICKER TYPICAL OF NEW INSTALLATIONS

Outstanding advantages of H & B One-Process Pickers (new or changed over) are as follows:

1. Reduction of operating costs.
2. Production of more even laps.
3. Continuous process, without interruption or handling, from Opener Section to Finisher Section.
4. Double evener motion which slows down or speeds up cages and calender as lap requires.
5. Synchronized electric control switch governs flow of cotton from opening room to picker lines.

MACHINE CO.

Textile Machinery

DIVISION **PAWTUCKET, RHODE ISLAND, U. S. A.**

BRANCH OFFICES
ATLANTA, GA.
815 CITIZENS AND SOUTHERN
NATIONAL BANK BUILDING
CHARLOTTE, N. C.
1201 JOHNSTON BUILDING

Use the cot that won't lap...

J490 resists laps even when running wool or synthetics on cotton equipment

YOU can keep wool or synthetic fibers spinning smoothly on cotton system equipment when you use Armstrong's new J490 Accotex® Cots. They're made of a synthetic rubber specially compounded to resist top roll laps.

In drawing or roving, for example, fibers won't pull out of the sliver or roving and accumulate on the top roll when you use J490 cots. In spinning, Armstrong's J490 Accotex helps send broken ends down to the scavenger roll where they belong.

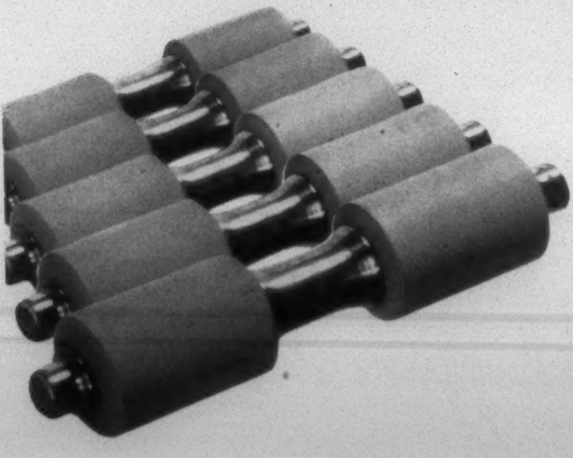
Long staple cottons draft well, too. Their long, wiry fibers tend less to curl up and wrap around a J490 roll.

Temperature and humidity changes don't affect the specially developed synthetic rubber used in the J490. This cot won't sweat in high humidity.

Besides being highly lap resistant, Armstrong's J490 Accotex Cots are exceptionally durable. Their tough synthetic rubber compound has a long initial life. And these cots can be rebuffed four or five times for extra service lives. Each buffing costs but a few cents per roll. For maximum freedom from eyebrowing, J490 cots should be used with revolving clearers.

Check the performance of Armstrong's J490 Accotex Cots on a test frame now. Your Armstrong representative will gladly help you arrange this test installation. Ask him for samples, prices, and additional information on this and other Accotex Cots. Or write to Armstrong Cork Company, Textile Products Dept., 8207 Arch Street, Lancaster, Pa.

CORK COTS
ACCOTEX APRONS
ROLL SHOP EQUIPMENT



J490 Accotex

NC-727 Accotex Cot serves more spindles than any other roll covering

ARMSTRONG'S NC-727, Accotex Cot is the most widely used general purpose roll covering because it spins high quality yarn consistently. It is used on work where a synthetic covering with long wear, better drafting, and maximum eyebrow-resistance are needed.

In NC-727 Accotex Cots, you get the advantages of both synthetic rubber and cork. This combination insures better drafting with high yarn strength and resistance to glazing. The frequent rebuffing that shortens cot life is not necessary with Armstrong's NC-727 Accotex Cots.

NC-727 Accotex Cots maintain a good drafting surface longer than "straight" synthetic covers. And after a long initial service life, they can be rebuffed to a "like new" condition as many as five or six times. NC-727 Accotex Cots are unaffected by hard ends. They have good lap-resistance because they have little affinity for textile fibers, and are non-sweating under any mill condition.

All Accotex Cots offer these extra advantages

GOOD START-UP—Accotex Cots are non-thermoplastic and resist flattening.

SOLVENT RESISTANCE—Accotex Cots are not affected by oil, water, dyes, or any of the commonly used textile solvents.

SEAMLESS CONSTRUCTION—Accotex Cots have no seams, no structural weakness to cause premature failure in service.

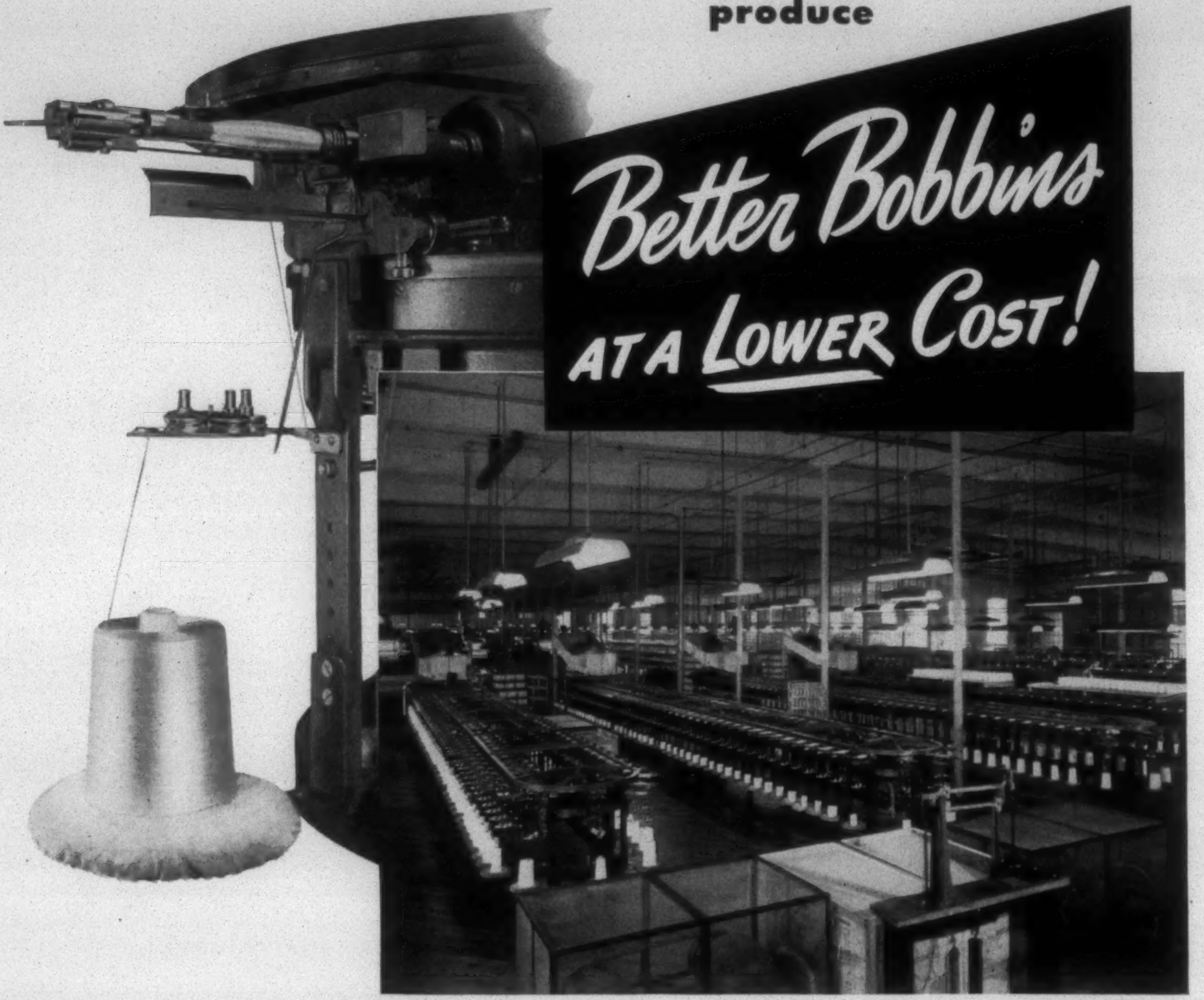
QUICK ASSEMBLY—Accotex Cots are ready glued for easier, quicker assembly.

ARMSTRONG'S ACCOTEX COTS

HOW TO CUT FILLING WINDING COSTS IN YOUR MILL . . .

ABBOTT Automatic RAYON QUILLERS

produce



- **Better Weaving Bobbin—** Especially designed to wind overlapping layers at both the tip and base of the conical section of the bobbin which, with proper tension, gives you a bobbin of the very best weaving characteristics.
- **Lower Cost Operation—** The moving assembly line principle is the feature of these Quillers, as Traveling Spindle Units eliminate a lot of unnecessary floor labor and the need for operators to fill a multitude of small supply magazines.
- **One Automatic Head—** Simplicity of operation greatly reduces maintenance overhead—permits manufacture at lower cost per machine to you. Only one Automatic Head per machine feeds bobbins from a supply hopper holding several thousand empty bobbins into each Traveling Spindle Unit and doffs full bobbins at the same time.

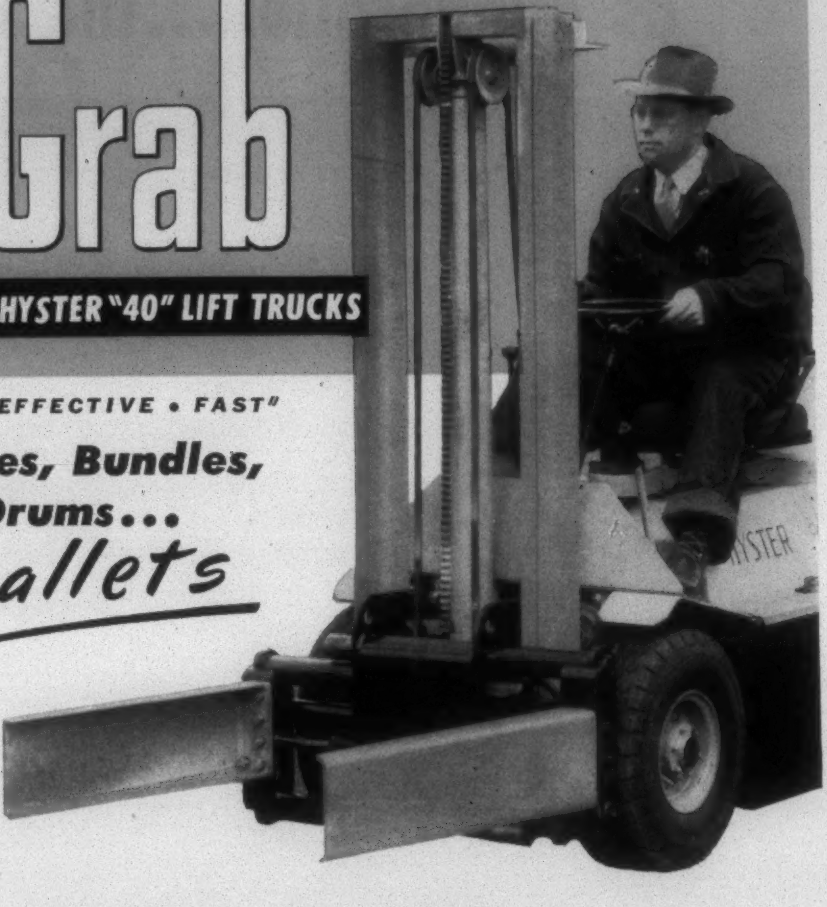
Write for further information to:

ABBOTT MACHINE COMPANY
WILTON, NEW HAMPSHIRE
SOUTHERN OFFICE, GREENVILLE, S. C.

"Greatest advancement in lift truck equipment since pneumatic tires"

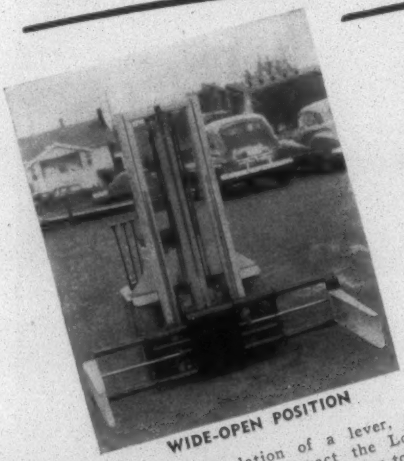
HYSTER Load-Grab

for use with HYSTER "20" and HYSTER "40" LIFT TRUCKS



"LOW-PRICED • SIMPLE • EFFECTIVE • FAST"

Handles Bales, Boxes, Bundles, Bags, Barrels, Oil Drums... *without pallets*



WIDE-OPEN POSITION

By the simple manipulation of a lever, the operator can expand and contract the Load-Grab Arms from the closed 17 in. position to the wide-open position of 62 in. on the Hyster "20" and 66 in. on the Hyster "40".

Handling Cotton Bales

what it is...what it does... Hyster Load-Grab is a simple, sturdy, hydraulically operated clamp device, with several different types and options of load arms. Load-Grab picks up any kind of a load as easily as you pick up a handful of cards.

how it does it... Hyster Load-Grab *side squeezes* with just enough pressure to lift and transport loads without the use of pallets . . . **Regular Load-Grab Arms, Rubber Faced Arms, Spike Faced Arms, Drum Handling Arms and Pallet Load Arms can be interchanged or installed in a few minutes.**

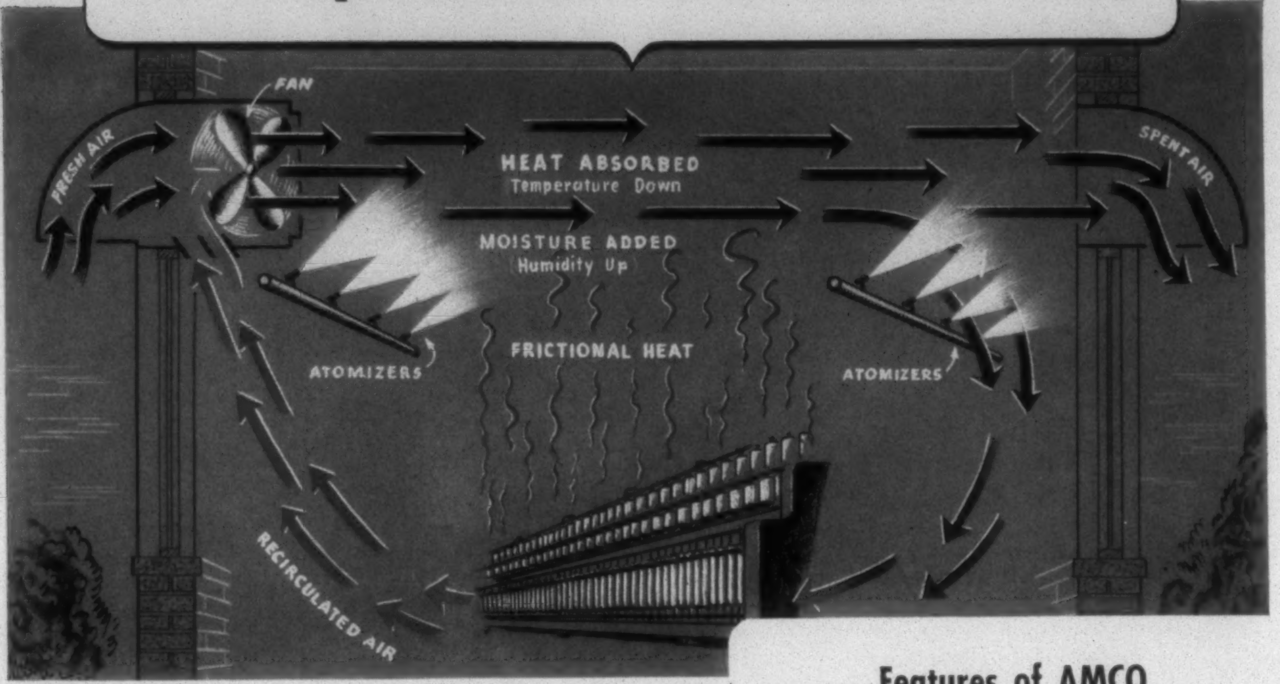
CONTACT YOUR HYSTER DISTRIBUTOR OR WRITE FOR LITERATURE

HYSTER COMPANY

THREE FACTORIES

2988 N. E. CLACKAMAS STREET, PORTLAND 8, OREGON
1888 NORTH ADAMS STREET.... PEORIA 1, ILLINOIS
1088 MEYERS STREET......... DANVILLE, ILLINOIS

Nothing cools so simply as evaporation...the AMCO way



- With completely automatic AMCO Evaporative Cooling system a controlled amount of fresh air is drawn into the mill from outside and combined with some re-circulated air. Spray from atomizers introduces moisture and relative humidity is raised to the desired point. Frictional heat is absorbed by evaporation of moisture thus reducing excessive room temperature. Spent air is exhausted automatically through controlled vents.

Simple, flexible, economical—AMCO treats each room as a separate unit. No expensive changes are necessary . . . no air ducts to install . . . no jump in maintenance costs. What AMCO humidification and cooling has done for many well-known, progressive textile mills, it can do for you. Let an AMCO engineer show you the way to better product quality and increased output.

Features of AMCO Humidification and Cooling

Reduces excessive temperature and holds relative humidity at point best suited to fibre and process.

Permits faster machine speeds in high friction (heat) areas.

Assures evener yarn counts and increases breaking strength.

Gradually increases regain for good roving and consequent better spinning.

Drafting of fibres smoother and more compact.

Waste and fly greatly reduced.

Increases worker comfort.

Easier to install—minimum disruption.

Amco Evaporative Cooling utilizes your present humidification system.

High flexibility to meet changing room conditions.

No cumbersome ducts to require cleaning.

Minimum maintenance.

AMCO

HUMIDIFICATION and COOLING

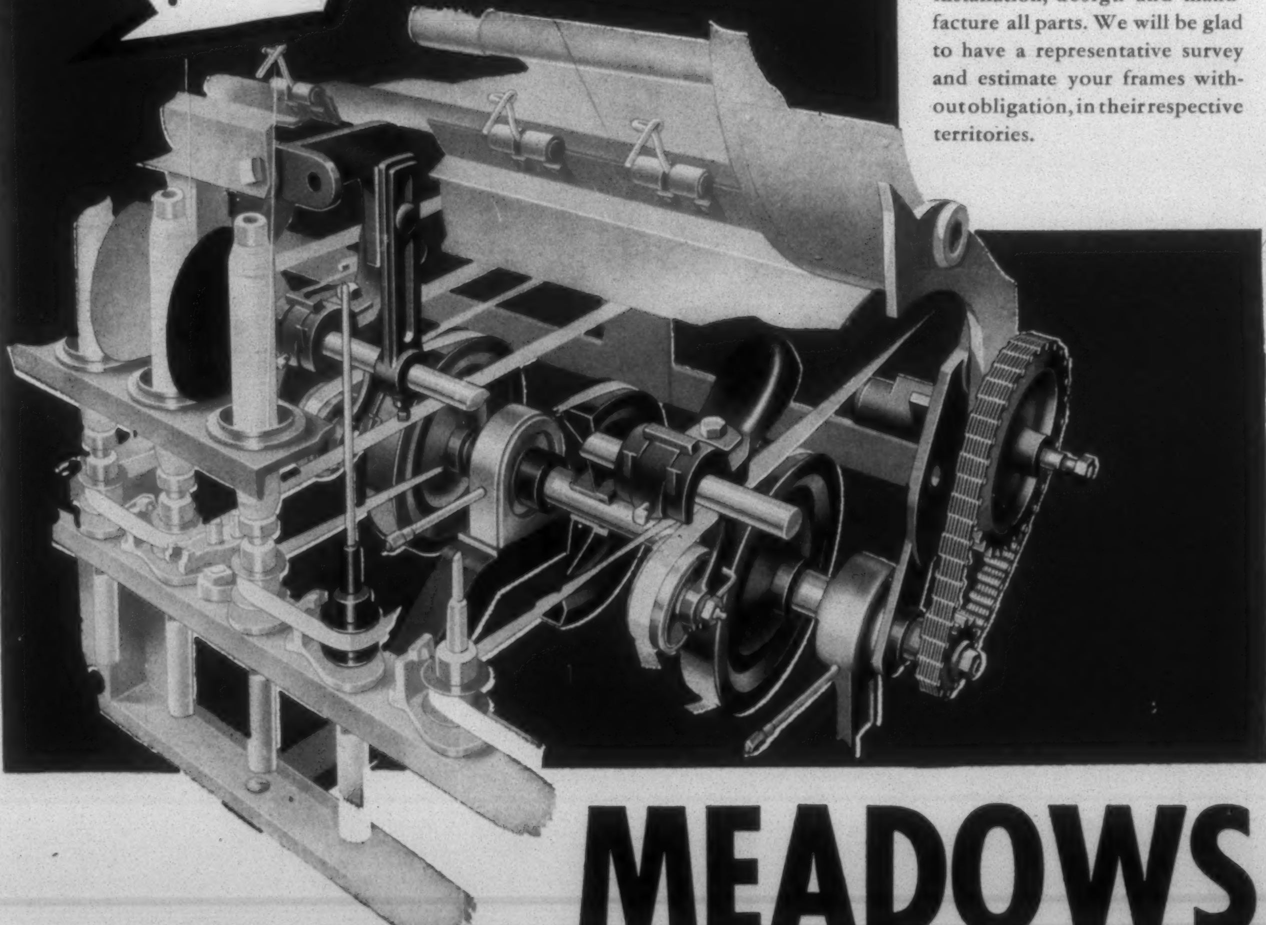
AMERICAN MOISTENING CO. AFFILIATED WITH GRINNELL COMPANY, INC.
PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE

Step Up Production of OLD FRAMES

- Fewer Ends Down!
- No More Heads to Jerk Out!
- No More Cylinder Trouble
- Less Vibration!
- Uniform Speed and Twist!
- Better Package-More Yarn!

MILLS have found that the *quickest,* most *economical* way to increase production on old-model band-driven or tape-driven frames is with Meadows Conversions... Consisting of Ball Bearing Tape Tension Pulleys, light weight solid aluminum Separators, silent Chain Drive, Individual Drive Pulley, and ground and polished Shafting mounted on heavy-duty ball bearings—these conversions assure *low power* consumption, no *tapes off* due to choked or sticky pulleys, less wear on yarn, increased *output* and *no more cylinder trouble.*

We engineer and service each installation, design and manufacture all parts. We will be glad to have a representative survey and estimate your frames without obligation, in their respective territories.



MEADOWS

MANUFACTURING COMPANY • ATLANTA, GA.

Your Dyeing Will Be Quicker, Better, More Economical With ...

ORATOL L-48

A Feature to Remember!

ORATOL L-48 MAKES A GOOD BASE FOR DYEING

The problem in dyeing is to secure maximum penetration, quickly . . . level results with the most delicate shades . . . with no waste time or added expense.

Oratol L-48 is a powerful detergent . . . with high foaming, emulsifying, and wetting properties . . . and quick-as-a-flash scouring action. As a dye-bath assistant, Oratol L-48 is stable in hard water and performs equally well on all types of fibres — under acid or alkaline conditions.

What this means to you:

1. Quick, thorough penetration
2. Greater assurance of level dyeing
3. Fewer redyes . . . fewer rejects
4. Greater output . . . greater profit

Oratol L-48 has other important advantages: It is not affected by metallic salts. It acts as a dispersing agent for lime soap deposits. It rinses rapidly, requires less water, improves fabric hand.

Ask our representative about economical Oratol L-48. Or write, today, for technical data and your generous free sample for testing.

Plants, Branches and Warehouses

Plants: Passaic, Carlstadt, N. J.; Los Angeles, Calif.

Warehouses: Providence, R. I.; Philadelphia, Pa.; Utica, N. Y.; Chicago, Ill.; Greenville, S. C.; Chattanooga, Knoxville, Tenn.

WOLF BRAND PRODUCTS

JACQUES WOLF & CO.
Chemicals
PASSAIC, N. J.

John P. Maguire
& Company
INCORPORATED

Factors

370 FOURTH AVENUE
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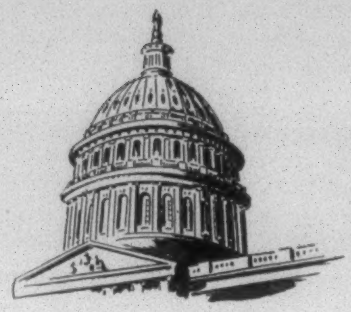
Check Credits
Cash Sales
Absorb Credit Losses

CORRESPONDENCE INVITED



WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Abuses still prevalent in industrial relations under the Taft-Hartley Law are getting careful study during the recess of Congress. Operations of big unions, enlarged vastly on wartime maintenance provisions, and some of which are non-complying, are being observed at close range, on the spot, in industries across the country. Purpose is to be ready with concrete proposals for revamping and tightening the act when Congress reconvenes. The heavy spade work is being done by the House Labor Committee.

Chances are even in the event of a Republican victory that N. L. R. B. will be abolished early in the next session, along with many other boards such as the Federal Trade Commission, and other New Deal packed agencies. Bills setting up new such boards, with wholly new personnel, will be pushed through Congress. Aim is to make a clean sweep of New Dealers.

Top question before the House Labor Committee: Can the big unions be curbed through a ban on industry-wide bargaining, and restriction in scope and power? Some legislators believe union power has become so great as to be wholly monopolistic, and to defeat all aims of equality between employer and worker in bargaining.

Organized labor, doubting that Truman can win, is trimming its sails and preparing to climb aboard the Dewey bandwagon. William Green stirred up a hornet's nest in A. F. of L. in proclaiming his group would not back Dewey. Philip Murray is non-committal, but urging his right-wing C. I. O. unions not to "fight" Dewey.

Labor's big political drive to defeat members of Congress is bogging down in confusion and internal strife. A half-dozen groups, headed by the A. F. of L. League for Political Action, and C. I. O.'s P. A. C., are in the field, and at war among themselves. In the tug o' war, programs have not gathered momentum, and expected money is not coming in.

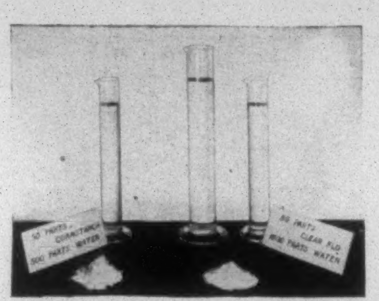
John L. Lewis won a clear-cut victory on every point in his parley with coal operators. His success is expected to inject welfare fund demands into all proposals for contract renewals in industry next year.

Contentions of unions in this year's pay raises that more wages can be squeezed out of profits is not working out in practice. Higher wage costs are being generally followed by higher prices to

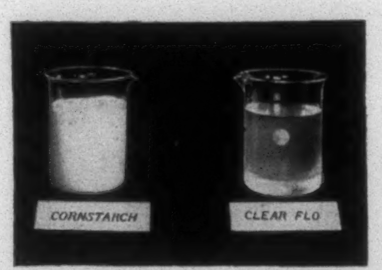
NEW! CLEAR FLO

STARCHES 'H' and 'L'

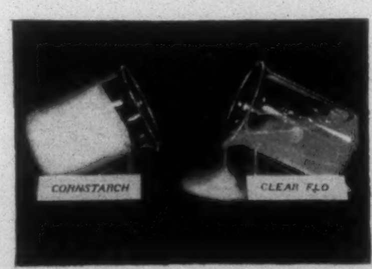
(High Viscosity) (Low Viscosity)



HIGH VISCOSITY. CLEAR FLO 'H' starch takes three times as much water as ordinary corn starch to give comparable viscosities.



CLARITY. CLEAR FLO starches are practically transparent while ordinary corn starch assumes a milky white opaqueness.



STABILITY. CLEAR FLO starches still pour readily from the beaker seventy-two hours after being cooked while ordinary corn starch has firmly jelled.

CLEAR FLO starch is the sodium salt of an ungelatinized, low substituted starch acid-ester derivative containing carboxylic and sulphonic acid groups. The great hydrating capacity of these groups results in starches with unique properties not found in ordinary starches plus the characteristics of some of the natural gums. Gelatinization of CLEAR FLO starches takes place with extreme sharpness and at considerably lower temperatures than with ordinary starches.

SWELLING TEMPERATURES AND RATES OF SWELLING. Taking the temperatures at which a 25% aqueous suspension of starch begins to show a measurable increase in viscosity as the gelatinization temperature, the figures below show the relatively low gelatinization temperatures of CLEAR FLO starches in comparison with ordinary starches.

CLEAR FLO 'H'	113 — 129°F
CLEAR FLO 'L'	113 — 129°F
Corn Starch	149 — 151°F
Tapioca	143 — 145°F

When cooked in a boiling bath, the gelatinization of CLEAR FLO starches takes place very sharply with the peak viscosity being reached almost immediately after the swelling of the starch begins. As with other starches, the temperature at which the viscosity increase is noted varies with the concentration, rate of heating and type of agitation.

SOLUTION VISCOSITIES

	% Concentration of Dry Starch	Solution Viscosity in Centipoises after 15' at 92° C
CLEAR FLO 'H'	2	420 Approx.
CLEAR FLO 'L'	10	440 "
Corn Starch	5	460 "
Tapioca	4	510 "

POSSIBLE APPLICATIONS. We're ready to match our research and laboratory efforts with yours in further exploration of CLEAR FLO starches in Laundry Starches, Desensitizing gums in Lithography, Cosmetics, Paper Sizing, Boiler Feed Water Compounds to Prevent Scale Formation, Dispersion of Pigments for Wet Grinding, Textile Finishing and Sizing, Low Temperature Swelling Binder for Wall Board, Gypsum, Doll Heads, Asbestos, Briquettes, etc., Cleaning Compounds, Water Colors and Paints, Wall Paper and Poster Pastes.

Address: National Starch Products, Research and Development Laboratories, 270 Madison Avenue, New York City. Plants: Dunellen, N. J., Chicago, Indianapolis and San Francisco. In Canada: Meredith, Simmons & Co., Ltd., Toronto and Montreal. In Holland: Nationale Zetmeelindustrie, N. V. Veendam.

National
STARCH PRODUCTS

STARCHES — AND SPECIALTIES WITH EASILY DEMONSTRATED SUPERIORITY consumers. Higher automobile prices, and 50 cents a ton more on coal, are leading the way.

Some government officials expect the start of a business sag early in January. Others, who expect big government spending to continue through 1948, say it will come in mid-1949. Virtually all are in agreement it's coming sometime, but hope it will be no more than a shakedown to normal conditions.

If the President had any idea of withdrawing, he abandoned it when he realized the party had no other possible candidate. Withdrawal would have precipitated probably the biggest cat and dog convention fight of the century, and hopelessly split the party.

Significant thing in both national conventions this year is the marked decline in the dominating voice of labor spokesmen. Policies and candidates were not "cleared" with any labor leader in either camp. Trend in the Democratic convention indicates, however, that Truman will lean heavily on unions in seeking election. More than anything else, union funds are needed for campaigning. In the past Northern Democrats have financed their state and local campaigns, and Southern Democrats have supplied the money for the national campaign.

Dewey's ace asset is his teamwork, and it's being carried into the campaign set-up. His Albany administration has never included the idealists and theorists of a "brain trust;" his aides have generally been of realistic and conservative viewpoint.

Chairman Knutson says he will seek more tax reduction next year, but there's no agreement on this. Changes may affect only excises and revenue reform. The costs of government will stay high.

European countries are complaining that this year's relief funds from Uncle Sam are not enough, and rising prices are taking too much. So far $900 million has gone over in grants and none in loans. No European country wants a loan. Storm clouds are rapidly gathering over European relief, and a Congressional inquiry seems certain. Figures show already much of the money and equipment filtering through to Russia.

Dewey is expected to press for a national F. E. P. C. law if elected. Foreign elements and Negro voters in Northern industrial centers are virtually unanimous on this demand. There are four million more Negro voters, out of the South, in the North this year than in 1940.

If elected, Dewey will have a painful time with the next Congress, due to scars of Philadelphia. Martin and Halleck in the House, and Taft in the Senate, are not expected to shift much to take Dewey orders. Dewey team-work will meet its greatest test.

Warren, as vice-president, is not expected to cut much figure in a Dewey administration. The Constitution gives him the job of presiding in the Senate, and a dual role is difficult. It was tried with both Coolidge and Garner. A vice-president with a Congressional viewpoint never fits in.

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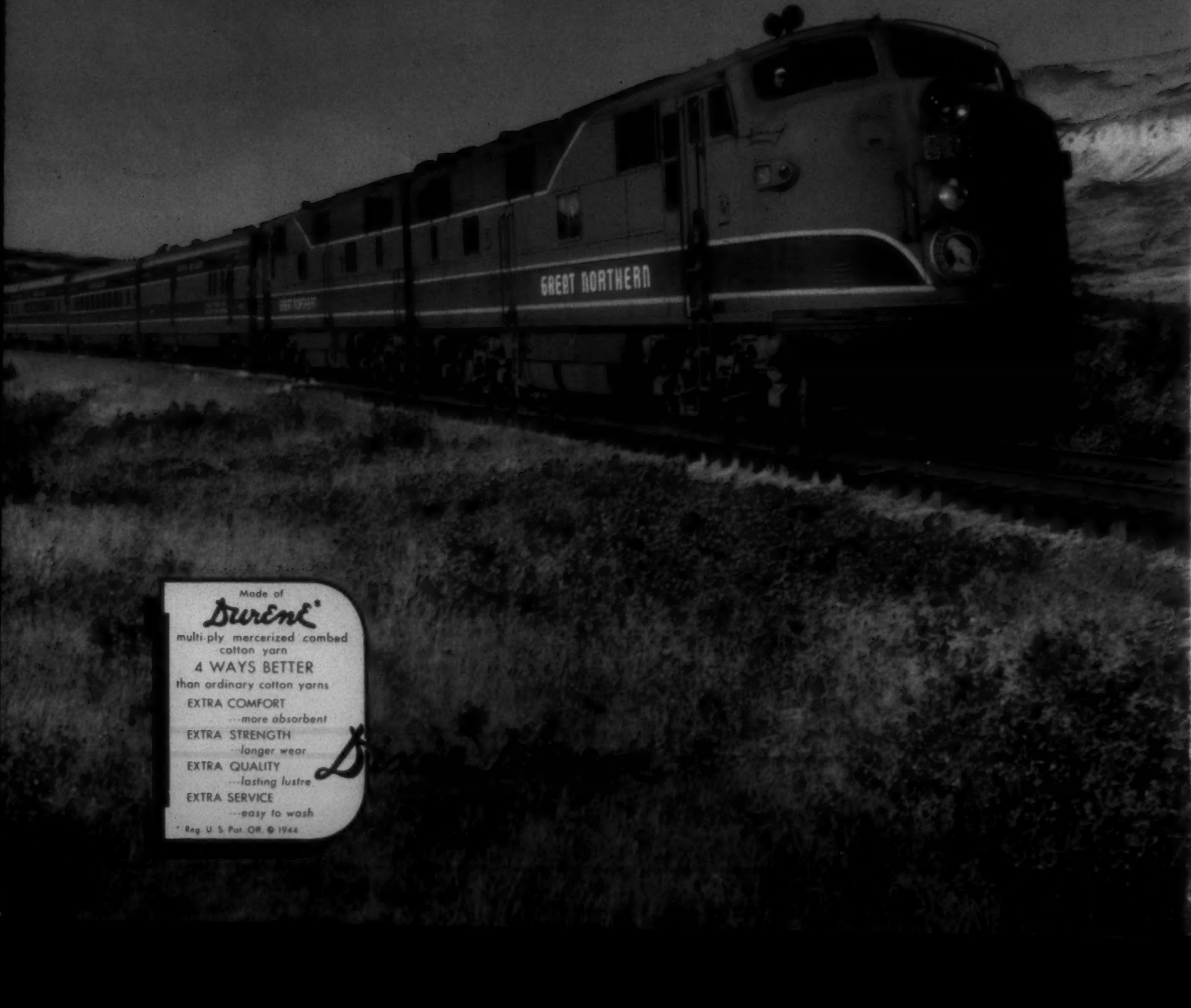

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multi-ply mercerized combed cotton yarn
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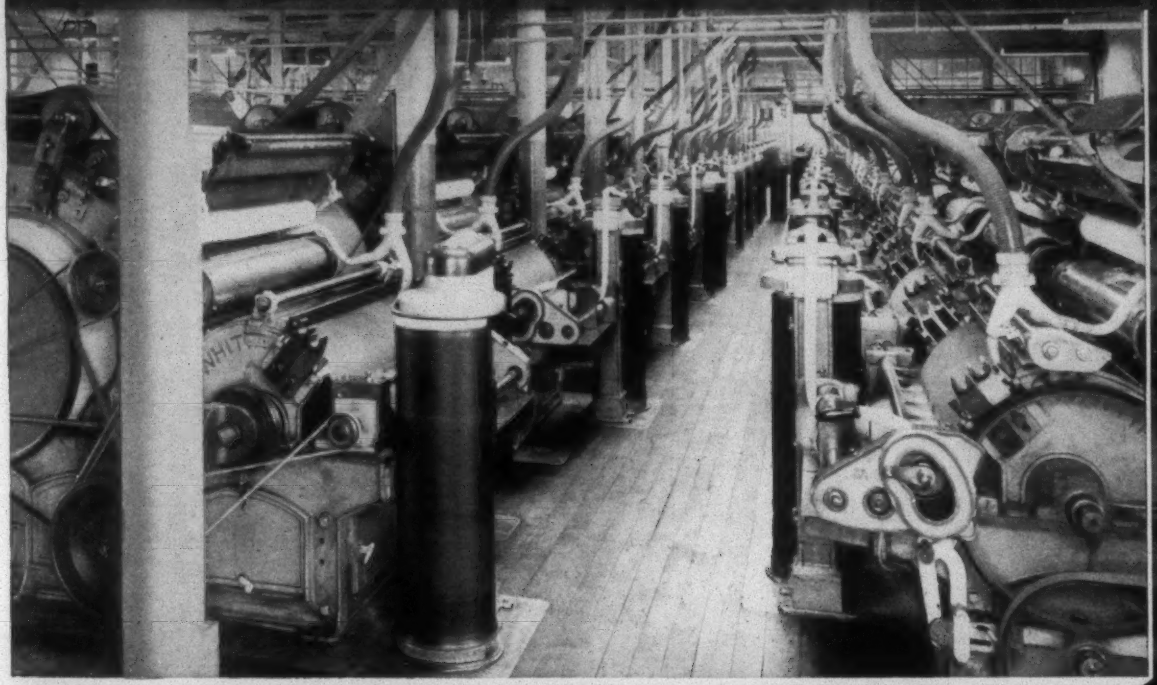
In whitest white or clean, clear, pleasing colors, there's a BARRELED SUNLIGHT Paint for every job

TUFFER Card Clothing Means Fine Even Sliver



YES, fine even sliver comes off each card that's clothed with Tuffer Card Clothing.

The Tufferizing Process—developed and exclusively owned and used by Howard Bros.—cuts and forms wires with an accuracy never before obtained in the making of card clothing. The wires are precision-formed and placed accurately and uniformly in the famous Tuffer Foundation. When drawn on the cylinder they fit snugly—sides perfectly parallel—every point in place.

These outstanding features of Tuffer Card Clothing give you proper carding—carding that means greater production of quality material. And you'll find, too, that the efficient, economical performance of Tuffer Card Clothing helps production in every department.

Let a Howard Bros. representative inspect your clothing. He will work with you in improving the quality of your carding, and will make practical recommendations that will mean better material at lower costs.

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Have You Tried "ELVACET" POLYVINYL ACETATE EMULSION?

- **For development of semi-permanent finishes to improve hand, drape, appearance and launder resistance;**
- **As a stiffener for fabrics;**
- **As a preventive for edge rolling, warp-filling slippage and raveling;**
- **As a binder in back-filling compositions?**

Try it! You'll find this versatile resin may solve many of your finishing problems. With it, you can get practically any kind of a hand or drape. And at low cost—for it takes very little "Elvacet" to get required effects.

"Elvacet" can be applied with conventional finishing equipment. It can be used on a wide variety of non-woven, woven and knitted fabrics made from filament and staple yarns of all types and all constructions. Typical classes of goods which can be treated with "Elvacet" include: woven and knitted piece goods, toweling, pile fabrics, drapery fabrics, tricot knits for inner and outer wear, hosiery, etc.

We'll be pleased to tell you more about "Elvacet," how it can be used in economical finish formulas. Just write or call our nearest district office.

ADVANTAGES OF "ELVACET" POLYVINYL ACETATE EMULSION

Completely dispersed in water to give emulsion which contains resin particles of uniformly very small size.

Highly concentrated, with no modifiers. Easily diluted with water to requirements.

Highly compatible with starches, dextrins, gums, waxes and synthetic resins commonly used in semi-permanent and permanent finishes; also with ester-type plasticizers which are sometimes needed with "Elvacet" to get effects desired.

Highly stable—very little settling over fairly long periods or when highly diluted for normal use.

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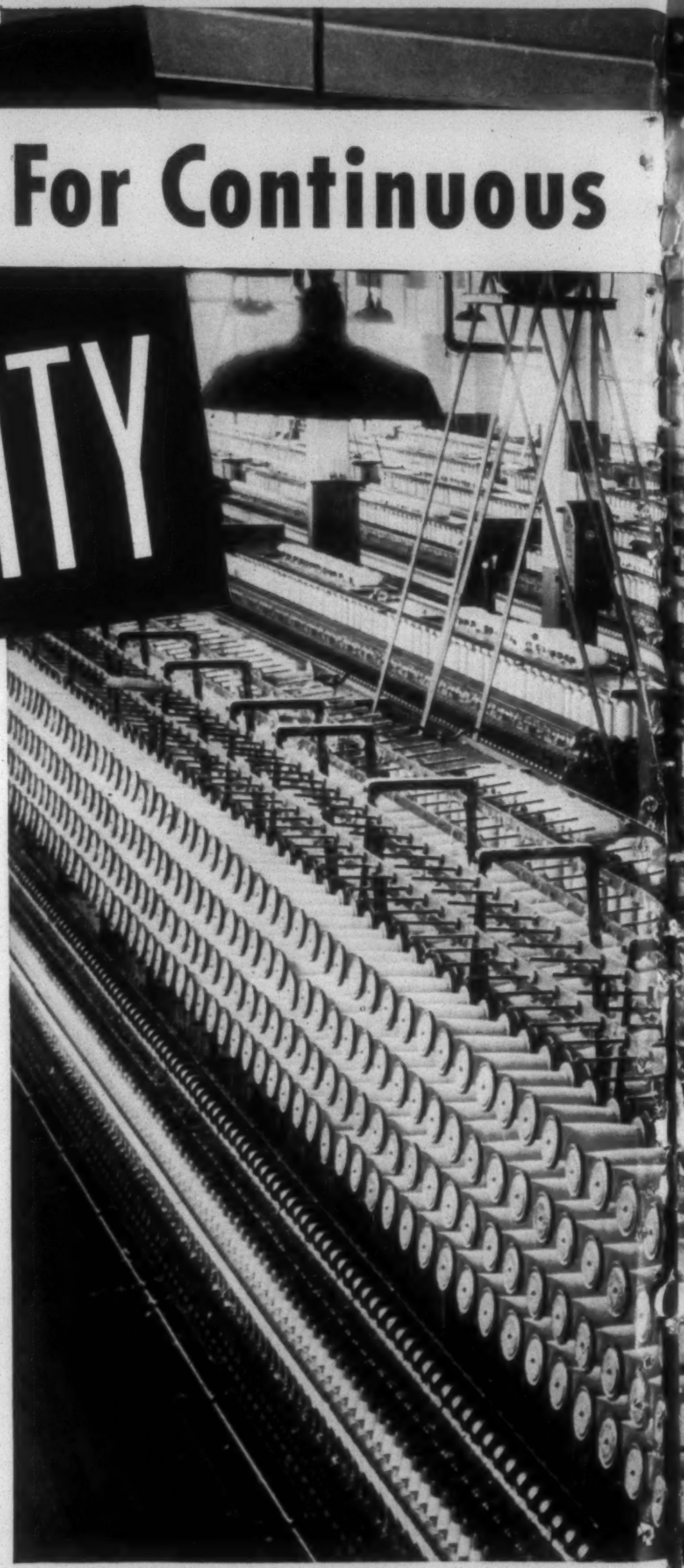
For Continuous



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LILY-WHITE OILS are highly finished spindle oils. They possess stability characteristics to resist deterioration. Viscosity does not increase in use.

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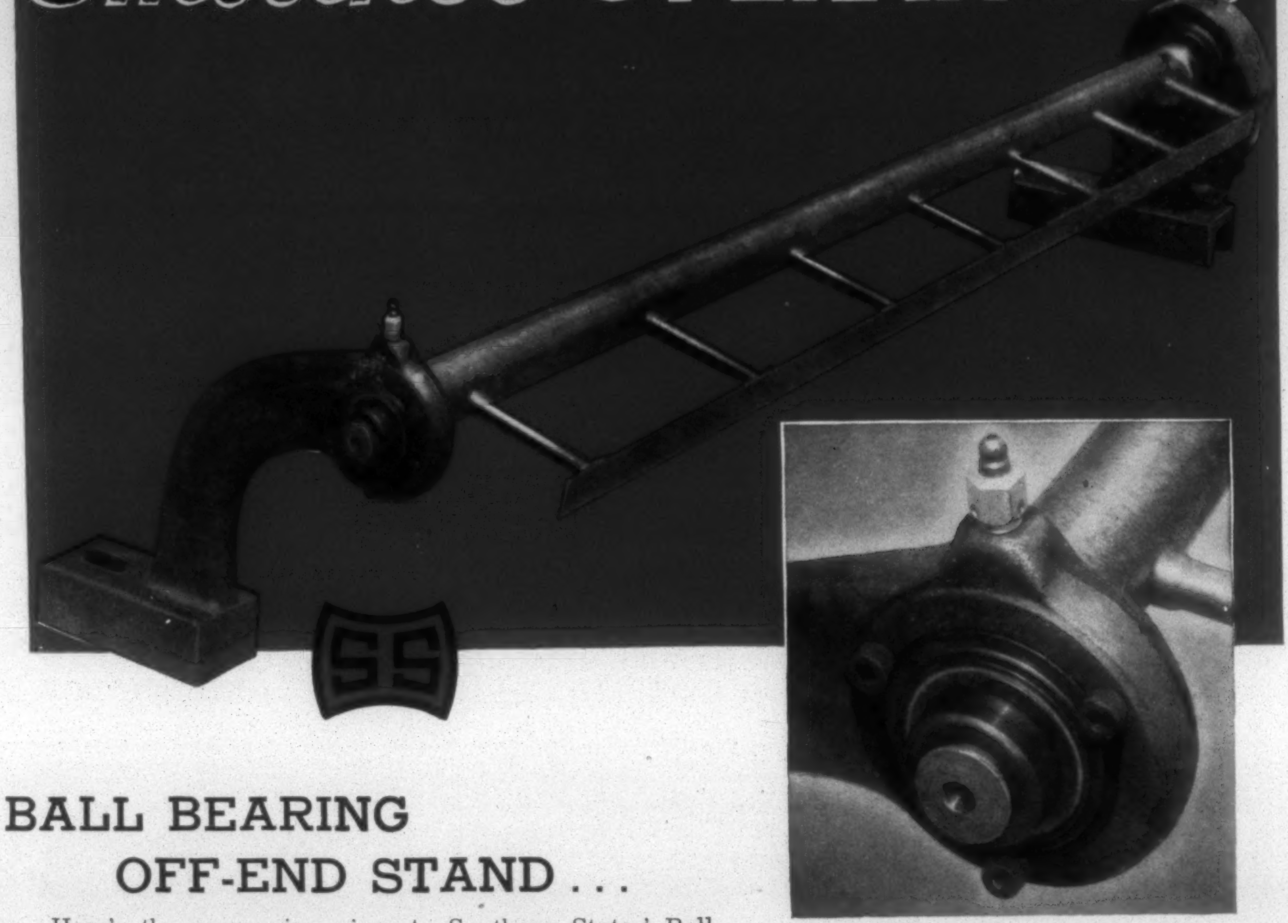


BALL BEARING OFF-END STAND . . .

Here's the companion piece to Southern States' Ball Bearing Comb Box . . . the Ball Bearing Off-End Stand! This new Stand is designed to provide smoother and completely leak-free operation of your Comb Stocks. It is available for all current makes of cotton cards.

A completely sealed bearing unit, this new stand—when used in combination with the Southern States Ball Bearing Comb Box—eliminates the possiblity of oil damage at the front of the card. While adjustments can be made at the Comb Box, the new Ball Bearing Stand will correct **minor** misalignment of the Comb Stock.

Southern States makes available to you **now** either separate unit or combination replacements of your old, worn-out comb boxes, comb stocks, and off-end stands. Purchase them individually or take advantage of complete replacement by ordering the three units at one time. Specify make of cotton card when ordering.

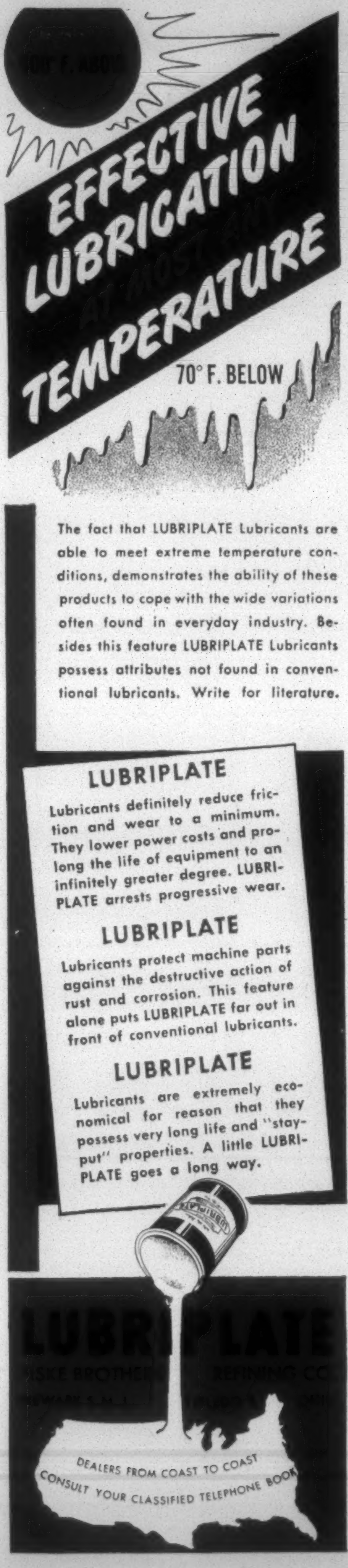
NEW-VERSATILE!

Replace old sleeve-type bearings with the new Southern States Ball Bearing Off-End Stand. Adaptable to **any current make of cotton card,** this efficient unit is completely **sealed,** requiring a minimum of attention. Simply and quickly installed, it is available for either right—or left—hand mounting and can be reversed **right in your cardroom!** You can insure more accurate comb setting—retain this accuracy for the life of the bearing.

We invite your inquiry on any one or all of these items . . .
Southern States Ball Bearing Off-End Stand, Comb Box or Comb Stock.

Southern States Equipment Corp.
HOME OFFICE AND FACTORY
HAMPTON, GEORGIA

HENDERSON FOUNDRY & MACHINE COMPANY DIVISION
Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South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70° F. BELOW

The fact that LUBRIPLATE Lubricants are able to meet extreme temperature conditions, demonstrates the ability of these products to cope with the wide variations often found in everyday industry. Besides this feature LUBRIPLATE Lubricants possess attributes not found in conventional lubricants. Write for literature.

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Lubricants definitely reduce friction and wear to a minimum. They lower power costs and prolong the life of equipment to an infinitely greater degree. LUBRIPLATE arrests progressive wear.

LUBRIPLATE

Lubricants protect machine parts against the destructive action of rust and corrosion. This feature alone puts LUBRIPLATE far out in front of conventional lubricants.

LUBRIPLATE

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the bulletin board

Questions, answers, comments and other material submitted by the readers for use in this column should be addressed to Editors, TEXTILE BULLETIN, P. O. Box 1225, Charlotte 1, N. C. All material will be edited properly before publication.

ABOUT BIBB'S VILLAGE

Sirs:

A year or more ago you ran a feature article in one of your issues showing some special houses being built by either Bibb Mfg. Co. or Callaway Mills. They were four or five-room houses made of brick and had tile floors. If you can supply me with a duplicate copy of the issue just mentioned so that I can see these houses, or if you can tell me definitely which of the mills built same so that I can contact them, it will be very much appreciated.

C. H. Ross
Secretary and Treasurer
Ross Fabrics, Inc.
Morganton, N. C.

¶ Mr. Ross refers to "Bibb Builds A New Mill Village," which was published in the Nov. 15, 1945, issue of TEXTILE BULLETIN. He has received tear sheets of the article.—*Eds.*

BOOK DEPARTMENT

Sirs:

Do you publish the book, *Textile Weaving and Designing*, by Thomas Nelson of North Carolina State College? We will appreciate it very much if you will let us know by return mail whether your company publishes this book, and if so, the price of it.

J. Faulkner
Purchasing Department
Burlington Mills Corp.
Greensboro, N. C.

¶ We publish *Practical Textile Designing*, by Dr. Thomas Nelson, dean emeritus of the North Carolina State College School of Textiles; it sells for $2 per copy.—*Eds.*

Sirs:

Unfortunately your book, *Clark's Weave Room Calculations*, has become a standard textbook here at the N. C. State College School of Textiles. I use the word "unfortunately" not because of the book itself, since I share the opinion of all of my fellow students that the book is, without question, the finest textile book ever printed. The unfortunate part is that there is only about one copy of the book for every 20 students. Those who are fortunate enough to secure a copy usually lend the book to others until they are ready to graduate. Then the book goes with them as the prize of a young textile library. I have tried to buy every copy of the book that I've seen but all to no avail. All of the owners feel the same as one boy who told me, "I'll sell you my car, clothes and jewelry, or lend you money or my toothbrush, but my *Clark's* you cannot have." I am writing this letter for nine of my close friends and myself to ask—no, not ask—BEG of you to let us have ten, nine, eight, or even one copy of the book. We have been told that no copies were available by our school book store, but at least no harm can be done by writing to you. Please, if you cannot send new copies, could you possibly tell me where second-hand copies might be obtained?

Roger T. McManus
202 Groveland Ave.
Raleigh, N. C.

¶ As far as we know, not one single copy is available. However, take heart; a new edition is on its way at long last. Until the new edition is available the first few chapters, in pamphlet form, will be distributed to textile school students.—*Eds.*

45 YEARS IS A LONG TIME

Sirs:

After serving this company for 45 years I am retiring July 1. I am getting everything in shape to leave the job in good running order. I am building a nice house here and hope to enjoy it for several years. Hope to get up to Charlotte soon and will drop in to see you.

W. E. Garrison
Superintendent
Glenwood Cotton Mills
Easley, S. C.

¶ Few operating executives in the South can equal Mr. Garrison's record. Further reference to him will be found on the editorial pages.—*Eds.*

OPENING, PICKING, ETC.

Sirs:

I have just received the June edition of TEXTILE BULLETIN against my recent subscription, for which I thank you. I am interested in the series, "The Mill Of Today," and should like to know if it would be possible to secure the other three articles which have preceded the one in your June issue entitled "Horizontal Openers."

Martin B. Foil
Cannon Mills Co.
Kannapolis, N. C.

¶ Tear sheets of the first three installments, which took up mixing and blending, the feeder, and the opening line, have gone forward to Mr. Foil. The author of this series, who writes under the name of Robert Z. Walker, states that he is going right on through the mill.—*Eds.*

EVERYDAY CLOTHES, NOW

Sirs:

You folks certainly have dressed up the BULLETIN in the last few issues, and you are to be congratulated.

Edwin M. Clapp
Vice-President
and Division Manager
Georgia Power Co.
1330 Broadway
Columbus, Ga.

¶ We could say something trite about the new look.—*Eds.*

PHILOSOPHY DEPARTMENT

Sirs:

We are very much interested in obtaining a tear sheet of the following article which appeared in the February, 1948, issue of TEXTILE BULLETIN: "Viewing The Social Structure of Man."

R. L. Shelton
Director of Purchases
Gates Rubber Co.
Denver 17, Colo.

¶ Requested tear sheets have been sent to Mr. Shelton. Readers will note that the author of the mentioned article, W. M. McLaurine, is currently writing another series. —*Eds.*

NOT OUR LINE, BUT—

Sirs:

We are trying to contact a manufacturer of pressing machinery suitable for use on heavy underwear, in addition to the U. S. Hoffman Machinery Co. It may be that you have knowledge of such a manufacturer and we would very much appreciate your advising us of such a supplier.

L. G. Reid
Washington Mills Co.
Winston-Salem, N. C.

¶ Pressing machinery is built by the Prosperity Co., Inc., 2224 Erie Boulevard East, Syracuse 1, N. Y.; Troy Laundry Machinery Division of American Machine and Metals, Inc., East Moline, Ill.; and American Laundry Machinery Co., Cincinnati 12, Ohio.—*Eds.*

S. T. A. MEETINGS

Sirs:

Please give dates of all the coming Southern Textile Association meetings for the next few months.

S. B. Henderson
Southern Sales Manager
Bullard Clark Co.
P. O. Box 133
Greer, S. C.

¶ No dates for Fall divisional meetings of the Southern Textile Association will be announced until the S. T. A. board of governors meets in Charlotte Aug. 27. The next annual convention has been scheduled for June 16-18, 1949, at Mayview Manor, Blowing Rock, N. C.—*Eds.*

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Reg. U.S. Pat. Off.

RODA
High grade gas, by-product and steam coal from Wise County, Va., on the Interstate Railroad.

DENDRON
High grade gas, by-product, steam and domestic coal from Wise County, Va., on the Interstate Railroad.

STONEGA
High grade, high volatile steam and by-product coal from Wise County, Va., on the Interstate Railroad.

PREMIX STOKER
A laboratory controlled product blended to meet exacting stoker requirements. From Wise County, Va., on the Interstate Railroad.

COKE
Roda and Stonega from Wise County, Va., and Connellsville Coke from Pennsylvania.

WESTMORELAND COAL COMPANY CRITERION COAL
High grade gas, by-product, steam and domestic coal—Pittsburgh seam from Irwin Basin, Westmoreland County, Pennsylvania, on the Penna. Railroad.

CROZER REGISTERED U.S. PAT. OFF.
Genuine Third Vein Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railroad.

LYNCO
High fusion coking coal for by-product, industrial stoker and pulverizer use from Wyoming Co., W. Va., on the Vgn. Ry.

Old Kentucky
Hazard No. 4 and No. 7 steam and domestic coal from Wiscoal, Knott County, Kentucky, on the L. & N. Railroad.

CHARMCO
Unexcelled Steaming Coal from the Fire Creek Seam in Greenbrier County, W. Va., originating on the N.F.&G.R.R.

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Gods of the Politicians

Republicans rise and bow three times every time the name of Abraham Lincoln is mentioned and they continuously prate about Lincoln, who was indeed a great man. He is the god of the Republicans.

Many of the Democrats swell out their chests and cry aloud that they are Jeffersonian Democrats. Thomas Jefferson is the god of the Democrats and they swear that they stand for all principles for which Jefferson stood.

The recent Republican convention, the organization of those who claim to be followers of Abraham Lincoln, adopted a platform declaring for the elimination of all segregation, even segregation in the armed forces, thereby opposing the position of Lincoln who said:

> There is a physical difference between the white and black races which I believe will forever forbid the two races living together on terms of social and political equality.

The platform of the Republican Party contains a plank favoring the elimination of segregation in the Army and Navy.

If enacted into law, and applied to the new draft, that would mean that a Southern white boy would be forced to serve in the armed forces and while doing so would have to eat and sleep with Negroes.

The right to select associates and companions has been regarded as a matter inherent to freedom in America, but our young men are to be seized and forced to bunk with Negroes.

The young white man, who either volunteers for service to his country or is drafted, is subject to being court martialed if he refuses to eat and sleep with Negroes.

Chief Justice Hughes, once the Republican candidate for President of the United States, said in an address before the American Bar Association:

> The states continue as reservoirs of power reserved, not conferred, by which they deal with a multitude of particular concerns, and enjoy differentiations congenial to local sentiment.
>
> However difficult it may be, in constitutional interpretation, to maintain perfectly, and to the satisfaction of all, this balance between state and nation, it is of the essence of American institutions that it should be preserved so far as human wisdom makes this possible, and that encroachments upon state authority, however contrivuted, should be resisted with the same intelligent determination as that which demands that the national authority should be fully exercised to meet national needs.

The Democratic convention at Philadelphia witnessed a great fight to take away from the Southern states the powers which they reserved when they became part of the United States.

While shouting that they were Jeffersonian Democrats and were followers of their god, Thomas Jefferson, Northern Democrats voted to eliminate the principle of states rights.

Yet we read that the founder of the Democratic Party said:

> I consider the foundation of the constitution as laid on this ground: That all the powers not delegated to the United States by the constitution, nor prohibited by it to the states, are reserved to the states or the people. To take a single step beyond the boundaries thus specially drawn around the powers of Congress is to take possession of a boundless field of power no longer susceptible of any definition.

The Republicans proclaim that they are followers of Abraham Lincoln and yet adopt a platform which diametrically opposes his sage advice and the considered opinion of Justice Hughes.

The Democrats shout aloud that they are Jeffersonian Democrats and yet fight to ignore the solemn warning given by Thomas Jefferson.

Politicians all.

Ed Garrison Retires

When the late M. G. Stone of Spartanburg, S. C., a "Yankee" who came South during the early days of the textile industry, retired from active work, he carried with him the respect and confidence of the entire textile industry of the South, including the multitude of traveling salesmen with whom he had come in contact.

He was respected both for his ability and his courteous and kindly manner. We never came in contact with any man who did not like M. G. Stone.

Now another man, M. E. Garrison, superintendent of the Glenwood Cotton Mills at Easley, S. C., has retired after 45 years with that company and we feel that he is entitled to the same rating as M. G. Stone.

Like Mr. Stone, he carries with him the respect and friendship of all in the textile industry who knew him, and as he retires to the rest and relaxation to which he is entitled we wish for him many pleasant years.

Stepping Up Production In England

British spinning mills produced 18,440,000 pounds of cotton and cotton waste yarns in the week ended June 12, the Board of Trade announced. The total was 300,000 pounds higher than the pre-war record and more than a billion pounds above the rate of 17,300,000 pounds weekly required to meet the industry's 1948 target of 900 million pounds.

Public sentiment in England has finally forced union labor in the textile industry to cease its "slowdown" policy and come nearer to doing an honest day's work.

A Favorite With Educators

A few months ago some 3,000 educators attended a convention at Chicago, Ill., under the auspices of the "American Educational Fellowship."

One of the speakers featured at that convention was the Negro poet, Langston Hughes, who wrote the following poem:

Listen, Christ,
You did all right in your day, I reckon—
But that day's gone now.
They ghosted you up a swell story, too.
Called it the Bible—
But it's dead now.
The popes and the preachers've
Made too much money from it.
They've sold you to too many
Kings, generals, robbers, and killers—
Even to the Tsar and the Cossacks,
Even to Rockefeller's Church,
Even to the *Saturday Evening Post.*
You ain't no good no more.
They've pawned you till you've done wore out.
Goodbye,
Christ Jesus Lord God Jehovah,
Beat it on away from here now.
Make way for a new guy with no religion at all—
A real guy named
Marx Communist Lenin Peasant Stalin Worker ME—
I said, ME!
Go ahead on now,
You're getting in the way of things, Lord,
And step on the gas, Christ!
Move!
Don't be so slow about movin'!
The world is mine from now on—
And nobody's gonna sell ME
To a king, or a general
Or a millionaire.
Goodbye Christ, good morning Revolution!

* *

This blasphemer, this Negro Langston Hughes, has three times been invited, and accepted the invitations, to address students at the University of North Carolina, and upon each occasion was entertained and was introduced by professors with warm words of praise.

After one of his addresses at Chapel Hill, N. C., the student publication, *Daily Tar Heel,* said:

> Langston Hughes, prominent Negro poet and novelist, spoke before various groups of the student body during the latter part of the week. His poetry as well as his speaking is the expression of a clear and sincere spirit.

No one can read the poem of the Negro Langston Hughes without having a contempt for the student who wrote the words of praise and even more contempt for those professors who extended the invitation for him to address students at the University of North Carolina.

A Liar In Uniform

A newspaper in Auckland, New Zealand, recently published a dispatch from Melbourne, Australia, containing the following:

> Col. H. B. Hester, United States military attache, in an address to 1,000 high school boys at a gathering commemorating the anniversary of the battle of the Coral Sea said:
>
> So much poverty, ignorance, prejudice and bigotry existed in the Southern states of America that I wonder why the United States did not adopt a Marshall plan for that area.
>
> While one per cent of the people own 50 per cent of the soil and means of production, we shall have isms—and anything except democracy.

The following is from the 1945 Statistical Abstract of the United States:

SOUTHERN FARM ACREAGE

	Operated by Full Owners	Operated by Tenants
Virginia	11,065,000	2,880,000
West Virginia	6,775,000	1,092,000
North Carolina	10,482,000	6,195,000
South Carolina	6,042,000	3,560,000
Georgia	12,350,000	8,793,000
Florida	6,402,000	833,000
Kentucky	13,457,000	4,469,000
Tennessee	10,886,000	4,790,000
Alabama	10,044,000	6,428,000
Mississippi	11,534,000	5,714,000
Arkansas	10,238,000	4,823,000
Louisiana	5,258,000	2,804,000
Oklahoma	9,841,000	11,410,000
Texas	50,865,000	33,980,000

These statistics show that far more acres of Southern farm lands are operated by their owners than by tenants and how utterly false were the assertions made by Colonel Hester.

It will be well for some of our readers to write their congressmen and senators and ask that they call upon the War Department to explain the false statements made by a military attache.

Note—Since writing the above we have been informed that Col. H. B. Hester is a former citizen of North Carolina and was therefore fully aware of the falsity of the statement he is reported to have made to 1,000 high school boys in Australia.

TEXTILE INDUSTRY SCHEDULE

Sept. 1-2—**SOUTHEASTERN PERSONNEL CONFERENCE**, Duke University, Durham, N. C.

Sept. 20-22—Fifth **SPINNER-BREEDER CONFERENCE** (sponsored by Delta Council advisory research committee), Stoneville, Miss.

Sept. 25—**SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Columbus, Ga.

Sept. 27-Oct. 1—Third **NATIONAL PLASTICS EXPOSITION**, Grand Central Palace, New York, N. Y.

Oct. 4-9—15th **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 14-15—Annual meeting, **NORTH CAROLINA COTTON MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 21-23—Annual convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Sheraton-Bon Air Hotel, Augusta, Ga.

Nov. 11—Annual meeting, **COTTON-TEXTILE INSTITUTE, INC.**, Plaza Hotel, New York City.

Dec. 4—**SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Atlanta, Ga.

March 7-9—Annual meeting, **NATIONAL COTTON COUNCIL**, Los Angeles Cal.

March 31-April 2—Annual convention, **AMERICAN COTTON MANUFACTURERS ASSOCIATION**, Palm Beach-Biltmore Hotel, Palm Beach, Fla.

What Is Research?

THE C. I. O. Department of Education and Research through its publication, *Economic Outlook,* has come forward with a typical misuse of facts on its favorite theme—that business is enjoying inordinate profits, is getting more than its fair share of the national income, and could afford to share some of it in the form of wages.

The *Economic Outlook* has harped on that theme for at least two years, and the only difference between previous misrepresentations and those in the current issue is the later figures used.

An ethical researcher begins with the facts, interprets them in the light of experience, and follows them to the logical conclusion, whatever that may be and whether or not it agrees with his own predilections. The unethical researcher sets up his conclusion first and then interprets or twists the facts in whatever way is necessary to arrive at the desired conclusion.

The second method is habitually used by the C. I. O. Department of Education and Research, and the current issue of its publication is no exception.

To prove that the profits of industry have increased by a greater percentage than the earnings of labor, the publication uses only the gross figures for profits and always makes its comparisons *before taxes*. It neglects to point out that taxes take a heavier percentage of profits than of wages.

Furthermore, the gross total of profits includes at least 20 per cent of inventory profits, of which the C. I. O. makes no mention whatever. Inventory profits are merely the increase in value of inventory as a result of rising prices. They are not real money and will buy nothing at all. That 20 per cent, then, must be deducted from the gross total of profits in order to arrive at the actual money received in profits.

Another item that the C. I. O. is careful to omit is dividends. To illustrate, let us take a single corporation, General Motors, which has some 43 million shares of stock outstanding. These stocks are owned by about 425,000 people in all occupations, and, no doubt, members of the C. I. O. have a few shares of General Motors stock. At least half the stockholders have incomes of less than $10,000.

The corporation is currently paying dividends at the rate of $3 a share, making $129 million of its "unfair share" of the national income that it is distributing to the 425,000 owners of the company. When all these items are deducted, the profit picture is entirely different from the gross figure (before taxes) as used by the C. I. O.

Let us consider the meat packing industry. In 1947, 67 companies doing 70 per cent of the meat business made an average profit of 1 1/3 per cent on gross sales, including hides, soaps, oils, and by-products. If these companies made no profit at all, the difference in the price of meat would be less than a half a cent a pound.

We can't see that it is a sin for industry, which takes all the risks, to make an average profit of five to six per cent on gross sales. And that is the margin as reported by the Department of Commerce. — *Charlotte* (N. C.) *Observer*.

Competency

GOOD workmanship is the foundation of economic progress and sound self-respect. It is only through greater, more efficient production that our total volume of goods and services can be increased, making possible a higher standard of living.

A greater circulation and possession of dollars does not mean that real income is thereby and necessarily increased. In an acute inflation, money measurements of production and income may increase enormously while actual buying power goes down and shortages become more acute.

Men improve their material and economic position by finding and developing ways of expanding output. Whenever an individual worker gains in efficiency, he, of course, makes himself the more deserving of greater return—provided, of course, there is sufficient demand for the kind of work he performs. When great numbers of workers do likewise, their total goods and services for distribution are proportionately increased.

But men do not look merely to the satisfaction of their material needs for the enrichment of their lives. It is in their inner states of mind and spirit that the most fundamental satisfactions are found. The most mature men and women are willing to make limitless material sacrifices if duty and conscience demand. In well-balanced and integrated living, faithful, competent and effective workmanship is basic. Sound and conscientious use of one's capacities of mind, body and spirit is a prime imperative in achieving the deeper returns of significant living.

In material, mental and spiritual realms, then, good workmanship is a major essential to the best individual and social living.

Yet in recent years there has been a growing carelessness in this respect, a broadening failure to rise to the implications of this familiar fact.

Pride of workmanship seems to have declined seriously among great numbers of us. Craftsmanship has diminished just when our capacities for taking greater advantage of it have made tremendous gains.

Doubtless the war's demands for speed, regardless of waste, have had much to do with this trend. The lack of competition for many jobs, the shortage of workers, is another factor.

Even before the war, when such competition was too intense, when millions were jobless, skills declined, pride suffered, discouragement had retarding effects.

But until the tremendous pressures of war came, there had been a gradual gain in the productivity of most industrial and agricultural workers. Mechanization and improved methods primarily accounted for this trend.

Then cost and individual efficiency became secondary to speed, and individual productivity went down. Carelessness and indifference and inefficiency among workers brought general complaint.

It is highly heartening then to come now, however, upon indications and reports of a reversal of this trend, a resumption of gains in productivity in many lines. If that can be kept up and broadened, new wonders lie ahead. — *Birmingham* (Ala.) *Age-Herald*.

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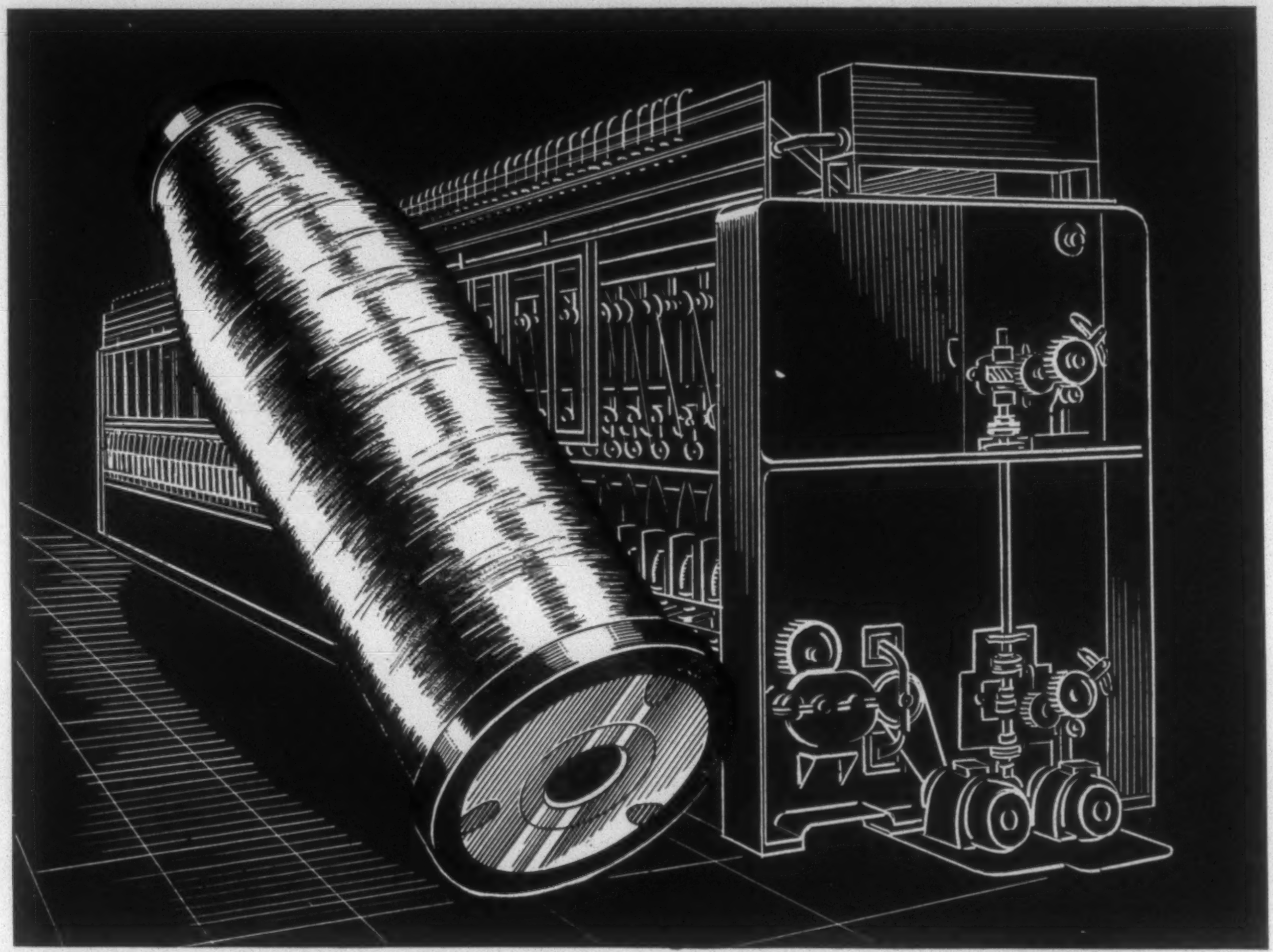

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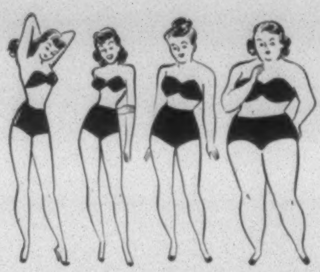

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VOL. 74 JULY, 1948 NO. 7

Some Aspects Of The Management Problems In The Rayon Industry

By J. SPENCER LOVE, Chairman, Burlington Mills Corp.

DURING the war and since the end of hostilities, a major portion of American industry has been in the position of straining production capacities in an attempt to fill unprecedented demands. It is now a matter of common knowledge to even the most casual reader that, in many segments of American business, production is rapidly coming into balance with demand. I suspect that this is as true of our industry as it is of any other. While there are still many unfilled needs, each day we find more evidence that we are about at the place where we can produce as much as we need to fill existing areas of demand.

In many companies, this altered situation will impose difficult strains. But I venture to suggest that the better managed businesses, both within and without our industry, will find this new set of conditions more of a challenge than an insurmountable difficulty. Good times or bad, the problems of "top management" are continuous in any event, not only in the meeting of day-to-day situations that arise, but more importantly in seeking in advance to foresee any and all eventualities. And as in any field of scientific endeavor, management must build its estimate of the future on the known factors of the past.

We at Burlington, as in any other prudent company, have long foreseen that we would eventually reach a period such as the one we are now entering and have tried to lay our plans accordingly. In our advance thinking, the thought uppermost in our minds was to take whatever steps we could to minimize the possibility of a repetition of the alarming catastrophe of the early '30s, not alone for our own company, but for industry as a whole. It seemed logical that one key to the situation lay in a study of the '20s. As we surveyed this period, there seemed to be one point that stood out very clearly, and which I believe was a misconception that contributed substantially to the general collapse of our most prosperous industrial period. These years following World War I were the first years in which America felt the complete impact of mass production. Strangely enough, this mass production which was providing this country with an abundance of material things was one of the principal causes of our later collapse, for the mass production of the '20s was a highly specialized production which could not adjust itself rapidly enough when there came a successive series of recessions in consumer demand.

Vast industrial organizations which were committed to the manufacture of one product, found that when the sale of that commodity fell off sharply they had no other resource at their command. They were not able quickly to turn to the manufacture of any other commodity, and thus had rapidly to restrict operations, lay off employees, and make successive contributions to the whole cycle of what we then, for the first time, called a depression. It is the opinion of many industrialists that this need not have happened to any such alarming extent as it did, had the mass production system been geared to greater flexibility, and had not wages and salaries been so much the target for deflationary efforts.

We must recall that when demand begins to slacken, it rarely drops off at every point simultaneously. Looking at the American scene today, I can readily imagine that the heavy backlog of orders for automobiles might one of these days be filled, but when it is, we still are going to need brains, brawn, materials and machinery to attempt to fill the vacuum in the housing situation. In the steel industry, it is not difficult to visualize that if automobile manufacturers reduce their rate of steel consumption that the miles of highway, the hundreds of bridges and thousands of buildings in the planning stages today will more than absorb any available surplus for some time to come.

In the textile world, as there come balancings of supply and demand in certain sectors of the garment trade, we are working hard to develop new sectors and new uses from the constantly diversified and improved raw materials that our yarn producing friends put before us. Our work applies not only to increasing markets for garments but to home fabrics, the transportation field, the industrial field and various other fascinating possibilities. In our research and experimentation on new weaves and constructions we have aimed at different end-uses from those for which we have normally produced.

In these efforts we have received encouragement and invaluable aid from the yarn producers. We have tried to keep ourselves so flexible that we could with no great dislocation shift emphasis from one spot to another, thus providing greater stability, not alone for ourselves, but for the industry as a whole—and in back of it the many communities in which we operate.

As part of this program, we are constantly expanding our laboratory facilities. Our laboratory was originnally the hub about which we built our program to control the quality of our fabrics. It has also become a clearing house of ideas. Many of these ideas have naturally grown out of day-to-day problems in the mills. Many of the forward strides made by our laboratory technicians have also been due to queries posed by men in our sales organizations. These men with their continual contact with other facets of industry have many times presented problems which stimulated the thinking that opened the way for technical men to make important contributions to the growth of our industry.

Training of Men

Another part of this program of diversification has been our effort to develop our manpower. We are constantly engaged in an active recruiting program for basically well-trained young men who will ultimately bring to us fresh mental equipment and new kinds of thinking. Coincident with this recruiting program has been an intensification of our company training programs. While there has been a steadily increasing amount of time and money spent on training in the last several years, the great emphasis has been on job training at mill level. This is of prime importance to efficient operation of existing facilities. However, the future of American industry rests on the development of men who have the broad capacities and vision to assume the positions of larger responsibility. We have attempted to train selected men, generally chosen from universities and technical schools, in every phase of our business so that even though they specialize in one division or department, they will have an understanding of the problems of the rest of our organization.

Management decline and failure is the cancer of business. It can manifest itself in complacency, conceit, stupidity, narrow-mindedness, and just plain dumbness. But the end result for the business is the same—death. It is not for me to say that management failure caused the death of the Hupmobile, Chandler, Peerless, Moon, Winton, Franklin and Pierce-Arrow automobile names—to name but a few in a single industry—but it must have played an important part. The search for young men who combine the management flair, the needed spark and the drive, with common sense and level-headedness is carried on relentlessly by all successful American businesses, large or small.

Our yarn producing friends furnish excellent examples of the type of diversification of which I speak. These companies are constantly availing themselves of new ideas and fresh points of view, and the products of their thinking have pointed the way, and developed the yarns, for a multitude of uses. The oil industry was once pretty well confined to supplying the oil lamp, the kerosene heater and the buggy axle. Through its research it has discovered diversified uses and now finds its products in ever increasing quantities, in the bathroom cabinets, on kitchen shelves, in paper sizings and other uses far removed from power, heating and lighting. At one time the great tire companies of this country confined their efforts to the manufacture of tires. It is interesting to note that while the supply channels for tires have been reasonably well filled for more than a year, the companies which make them have diversified their interests, found new uses and new markets for rubber products and have maintained their activities at a high rate.

I am sure you must be aware of this effort to avoid dangerous over-specialization at the expense of being able to switch emphasis to another front should one become untenable.

Another point of attack, and of defense planning on our part and that of many others, has been to put ourselves closer to the ultimate consumer. One of the great dangers of the mass production system historically has been a misinterpretation of the meaning of mass production. We have been subjected to vivid portrayals of mass production in which the entire emphasis has been placed on the capacity of industry to fabricate and assemble a product for the consumer. In many cases, the hand of industry has been pictured as turning the gigantic crank and spewing a torrent of "thing-a-ma-bobs," "what-nots" and "gadgets." In their zeal to produce, many have refused to recognize the fact that mass production really means production for the masses. If we are to produce for the masses, it stands to reason that we must have a very close understanding of what they want.

There was a time when this was not as important as now. I can recall when public standards of good taste were not nearly as highly developed as they are today. I can even recall when our friends in retailing used to assert that their stocks were not well-balanced unless they had a considerable portion of merchandise which was in doubtful or definitely bad taste. Many things have altered this condition—the radio, moving pictures, mass magazines—all have contributed to a higher level of taste and better knowledge of what constitutes good quality. And these factors, plus the airplane, have made the demand for style and quality instantly the same the world over. Johannesburg knows what New York is wearing in less than 48 hours and wants just that. No longer can we dispose of goods which begin to back up in the United States to good advantage by exporting them to some seemingly remote country.

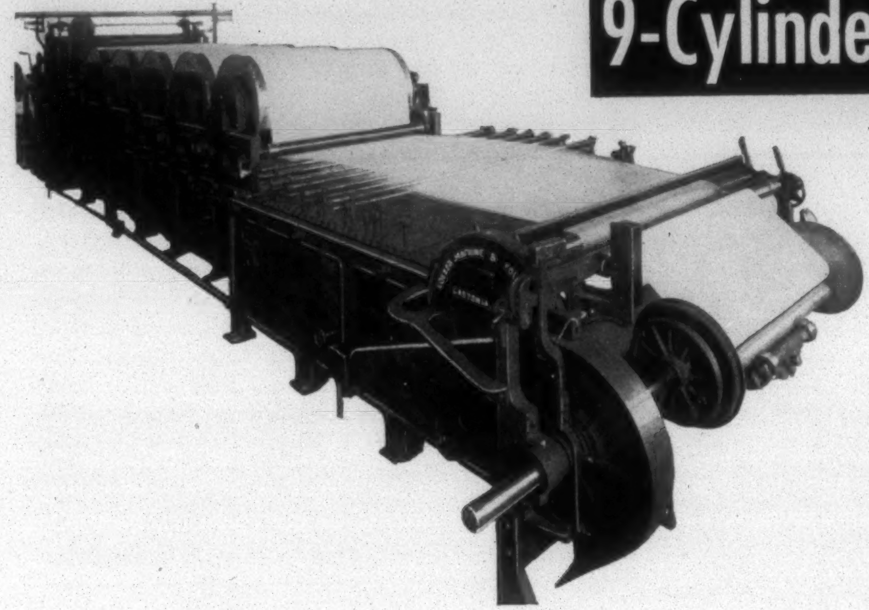
Getting Nearer to the Public

Thus we have become more and more acutely aware of the fact that if certain fabrics or patterns or shades are in demand by women, we can't sell them other things to good advantage. But being aware of that general premise and translating it into specific mill and converting operations are two different things. This is one of many reasons why we have constantly dyed and finished more and more of our production, and have gained closer and closer contact with the cutting-up trade, the retailers, and through them, the public. We realize that the public votes on what we produce and they can vote negatively by simply refusing to buy if what we make is not to their taste or to their pocketbook.

Curiously enough, we in Burlington have been criticized by some few people for consistently over the years extending our well-established policy of getting closer to the ultimate consumer. I call this a curious criticism, since to us our course has seemed natural, inevitable, and necessary—the historic trend of other industries and other branches of our own industry.

Weavers of fabrics from man-made fibers did not inherit centuries of experience. The men and women who are the ultimate users of our fabrics have not as yet established traditional tastes. Accordingly, we must keep close check upon consumer reactions in order that we may avoid the pitfalls of developing our business on unsound premises. The fact that the weaving of fabrics has paralleled the rise of civilization cannot alter the fact that our particular part

The Cocker High Speed 9-Cylinder Slasher



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3 in versatility

The Cocker High Speed 9-Cylinder Slasher handles cotton, spun rayon, and filament yarns with equal ease.

NOTE: This slasher can be built with 11 cylinders. Existing 9-cylinder slashers can be converted to 11 cylinders at a reasonable cost and with the use of very little additional floor space.

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of the textile industry is a very recent development. I would like to interrupt my thoughts for just a moment to tell you how we at Burlington came to change our emphasis to the man-made fibers, I assure you this was not done without considerable deliberation.

You will recall that rayon in the mid-'20s was not an important factor in the textile industry. Despite the fact that it had been produced commercially for more than 40 years, our annual production by 1923, the year Burlington started in business, had only risen to 35,000,000 pounds. It is certainly a sterling tribute to the members of our industry to note the progress which in 24 years has increased this poundage 30-fold to just under a billion pounds—and the end is by no means in sight.

Back in the mid-'20s, we watched the development of this "man-made" fiber. It was looked upon by everyone as a cheap substitute for silk, and such weaving as had been done was not impressive. Consumer acceptance, likewise, gave no indication that rayon would have any revolutionary effect on the textile industry. There was one thought, however, that kept going through our minds, and that was the tag line "a cheap substitute for silk." We asked ourselves "Could it be that rayon could be woven of such a quality that it would in truth become a real substitute for silk, and thus make available still another luxury item, at prices within the reach of all?"

We reasoned as our thinking progressed that a "man-made" fiber has certain inherent advantages. In the first place as a product of chemistry, it is produced from substances the chemical content of which is measurable. Secondly, the formulae in which these substances are used could be invariable, thus making available a yarn of a constant quality.

Neither is the chemist's laboratory subject to the vicissitudes of man and nature. With natural fibers, the thrower, the spinner, the weaver, the finisher, the manufacturer and the consumer have had to contend with crop failures, blights, scarcities and over-production. The volatile fluctuations of the natural fiber market kept the textile industry on "tenter hooks;" in many instances, management was forced to pay a terrific price in time consumed, and even more in nervous energy in trying to outguess the violent gyrations of commodity markets which affected the entire business structure and which in various instances broke some of the finest and best companies in the business. We felt that the elmination of these hazards would open the way for long range planning for a stabilized product and standardized production. We turned the principal emphasis of our business to "man-made" fibers in the belief that under our American system of "free enterprise" the way was clear for ambitious, intelligent people working together to build a fine business and at the same time perform a service to the people of this country.

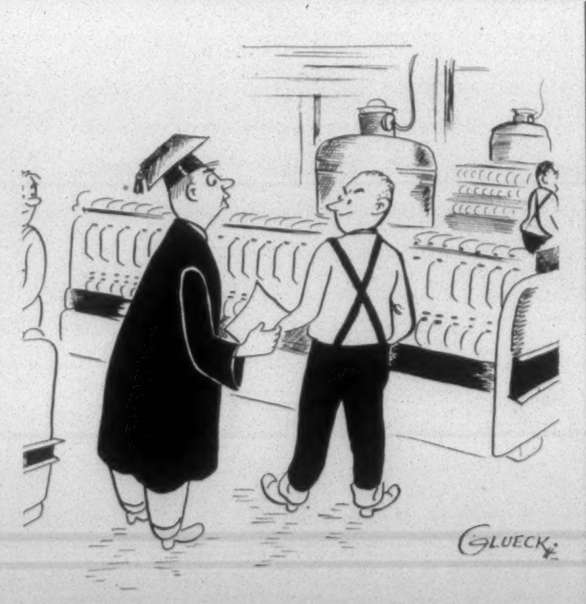
Burlington Mills began 25 years ago with a small group of men who thought they had enough know-how to get into business for themselves. They started with a very small mill and a faith in the future of "man-made" textiles. Our small group of men of a quarter of a century ago has now grown to a family of well over 25,000. As the company succeeded, certain developments became inevitable. Today, we operate in many phases of the industry in which our knowledge and financial resources would not possibly have permitted us to engage at the outset.

When we started into rayons, we bought our warps made up on the outside. We bought our filling wound on cops, and we generally sold the goods we wove in the gray to converters generally through the media of commission houses and brokers. One of our first moves was the installation of our own warping and slashing. This was followed in a few years by the installation of our own winding and quilling. It was some years later before we reached the decision to do our own throwing. Major early integrations and causes of much discussion and doubt were when we opened our own New York offices to do our own selling.

In the early '30s, we started selling our decorative fabrics in the finished form, doing most of the finishing ourselves. Later, as we entered the hosiery, the narrow fabrics, the fine cotton, and finally the men's wear fields we found that finishing one's own goods was the standard and accepted mode of operation among our stronger competitors. During the war, we found it best to convert and sell many other types of finished goods which we were called upon to make for the armed forces. We have long since felt that the advantages of a spinning and weaving company selling its goods in the finished form are so strong that there has been little room for debate. These advantages are obviously along lines of control of quality, levelling out of seasonal lags, better contact with cutters, and fashion trades, wider horizons for development and research and many direct dollar economies in several directions. Our experience in meeting the exacting requirements of the armed services appeared to be the final proof.

We lived through all the early trials of the rayon business, and continued to have faith in it. Because of that faith, we have grown to our present size.

Our "man-made" fiber industry is fortunate in having research-minded people engaged in the production of our yarns. From time to time, rumors are afoot suggesting that one or another of the larger weaving and spinning enterprises in the industry are considering entering the field of yarn production. I cannot speak for all, but I can say for Burlington Mills, that if no other factor deterred us, the tremendous job necessary to carry on adequate research in



"I am *not* putting on airs. I gotta wear them out, don't I?"

the field of yarn production is enough of a deterrent. We sincerely trust that our suppliers will continue with their research and development of yarns which have contributed so much to the advancement of yarns produced by chemistry.

Neither have we felt that we have a place in the manufacture of garments. This seems to us a highly specialized industry, and one for which we do not have the necessary qualifications. We have stuck to our own "knitting" (i.e., making cloth), and propose to stay where we are.

Another important consideration that I feel must be carefully weighed in all advance planning is that of the organization's attitude toward its employees and the employees' attitude toward the company. The "honest day's pay for an honest day's work" is an American truism, but it isn't just as simple as it sounds. We at Burlington, and we think we are only fitting into the pattern of any intelligent management group, feel that the first obligation and rule in personnel relations is to pursue the soundest possible basic policies, so that we can insure the maximum of continuous and profitable employment. We think it's a little silly to start talking about personnel relations without first talking about the stability of the company, in other words, without taking those steps in diversified, efficient mass production and knowledge of the consumer market that will insure the continuity of our employees' jobs. So we believe that the first principle in personnel relations is to come as near as we can to some kind of insurance that we will run the kind of company that will weather storms and offer reasonable security on the job.

I realize that some companies prefer to start at the other end of the cycle, even to go farther, and take a paternalistic attitude toward the people who work for them. We conceive that a man's sense of job security and personal dignity are of chief concern to him. We believe he'd rather have such real wages that he can provide most of the amusement, vacation and scholastic opportunities for his family rather than for us to seek to interfere unduly with those parts of his life that are primarily his own business.

We lay great stress on this question of real wages. The bulk of our employees work in Southern states where there are some natural advantages, such as lower fuel bills, more open spaces, generally slightly lower living costs. We try to think in those terms and to see that our standard of living is as high or higher than it is in any other segment of the textile industry. I repeat, this is not a paternalistic interest, it is simply, we believe, the basis of consistently sound relations between management and labor. And while our company offers a certain amount of recreational and other facilities and is constantly in various ways trying to improve and expand there, we never delude ourselves that a swimming pool or a moving picture theater or some other such gesture takes the place of a man's own pride in accomplishment, his ability to progress on his own merits, and in his enjoyment of a satisfactory compensation.

The thinking we have put into the conduct of our business appears, in the past few years, to have paid off. We have grown rather rapidly and have enjoyed a reasonable respect for the products we make.

Now and again we hear people remark that this company or that company is too big. I've even heard the remark that Burlington is too big. I just cannot believe that in a democratic country, subject only to temporary periods of legislated economy, that any company honestly serving the American public can get too big. We at Burlington have no secret process through which we can control other elements of the industry. Not one of the very largest textile companies in the business, such as ourselves, actually produces over two per cent of the total volume of textiles, and in our own more specialized field of man-made yarn fabrication there is no single company which consumes as much as ten per cent of the available supply. Hundreds of other companies or groups of individuals are in competition with us, purchasing from the same suppliers, weaving with the same methods, and even selling to the same customers. New ones enter the field each year. This same general freedom of opportunity and freedom of enterprise still exists in every line of endeavor in this country. Let us hope that no force from without or within will destroy that freedom.

I'm often puzzled by men who tell me that the day of opportunity has passed in America. I think it's significant that, despite increasingly hampering regulations, and taxation problems that are sometimes almost confiscatory, our company has been able to develop and prosper as it has in the last quarter century. I know of many others whose progress has paralleled or exceeded ours in that period of time. They are all still in the best American tradition.

There are two philosophies which are gaining ground in America today which I believe should have the careful attention of every thinking citizen; one is the governmental antipathy toward the natural growth of corporations, and the other is the high taxes, double taxes if you please, levied against corporate earnings.

I believe that nothing should be placed in the way of an individual's opportunity to progress, and that this right should be protected with all the forces we have at our disposal. I do not believe, however, that the opportunities for growth of the small man in textiles are often furthered by the hamstringing of his larger neighbor.

Our industry is an outstanding example of the importance of large units with adequate capital. These larger units have been able to make substantial contributions to research and technological advancement. Without the facilities which they have made available the development of fabrics woven from synthetic fibers might have remained where it was only 15 years ago, when the channels for rayon fabrics were pretty well reserved to the women's underwear field. Yet research requires the expensive combination of many heads and much money. You gentlemen who are engaged in the technical intricacies of this industry are well aware of the trials and errors and discouragements which go into the creating of one small forward step.

In most instances, only the larger companies can afford this heavy investment and expense. This is both practically and historically true; research and experimentation become so heavy a part of the smaller fabricator's overhead burden that he cannot survive unless he is so lucky or so wise that every guess is right. Even the large operator like ourselves must constantly survey his fixed burdens very carefully. The textile industry is so scattered and mobile that the large operator knows that the fruits of his expensive and tedious experimentation can often be copied overnight by any one of hundreds of smaller operators with no such fixed overhead burdens. It should be emphasized that the nature of the industry is such that few secrets can be kept long, and there are no practical restraints on copying most fabrics, methods, devices and processes. This is the greatest restraint on forward-looking management toward research and experimentation in the spinning and weaving fields—one that technical staffs do not always fully appreciate.

Other cogent reasons that the textile industry needs larger as well as smaller producers are along lines of distribution. In garment making and retailing there exist both the very large and the very small distributors, all filling important niches in the delicate mechanism that ultimately serves the public. The larger distributors in turn need large volume producers who have the facilities and capital for turning out with relative speed large quantities of wanted items. In many instances it is entirely impractical to expect such needed service from a multitude of smaller producers; volume activity requires a degree of standardization and dependability which cannot be attained from a multitude of smaller sources.

Let us not for one moment discount the importance of the small organizations or minimize the part that they play in our industry. Much of what the industry does stems from their willingness to attempt new things. Perhaps their most notable contributions can be found in their styling developments. It is a tribute to the flexibility and versatility of the industry that many of the very smallest are among the most successful. Nearly all the present large companies, including Burlington, grew from successful small beginnings.

There is a danger in our present high rate of corporate taxes which represents a real threat to our future security. Much of the progress of industry will hinge upon its ability to keep equipment modern. At dollar values of even a few years ago, the allowable rate of depreciation makes scant provision for replacement of equipment. It is necessary, therefore, that we appropriate large sums out of current heavily taxed earnings to insure ourselves against machinery obsolescence and ultimate failure. This requirement for heavy reserves must result in high prices and a smaller return on the invested dollar. The necessity of keeping dividend payments at low levels is making it difficult for many sound and well managed businesses to attract venture capital because even the restricted dividends are subject to double taxation. If profits are not ample to put aside substantial sums, the future of progressive companies is in danger under present conditions.

At Burlington we are proceeding as rapidly as possible with a modernization program. Despite many millions invested in new equipment and considerable construction of new buildings over the past few years, we still have outstanding commitments in excess of $15,000,000 and anticipate additional purchases. Though our dividends over the past year or more have been scarcely more than one-quarter of our earnings, these various programs have very nearly absorbed the entire differential between earnings and dividends. In addition to the foregoing, we have, over the past several years, paid out 2½ times as much in taxes as in dividends.

I do not choose to be one of those happy-go-lucky prognosticators who asserts we never again can have a major set-back in American business. Unfortunately, there are world factors beyond the control of any individual or any company that could bring about this kind of result. But, barring this kind of catastrophic event, it is my studied conviction that American business is today in a sounder position than it has been at any time in its long history. The early struggles of the industry to establish itself and the depressions of the '30s gave us many sudden and severe testings. We came through with a pretty good record. I think we'll stand that same testing in the period that lies ahead.

Mr. Love's paper was presented before the May 5, 1948, meeting of the American Association of Textile Technologists in New York City.

Our Responsibilities As Businessmen

By J. C. COWAN, President, Burlington Mills Corp.

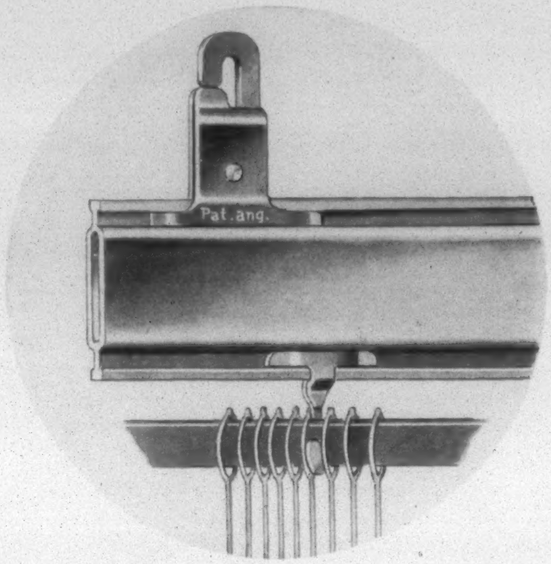
IT makes little difference today whether a man is a weaver of cloth, a maker of furniture, a banker or a grocer. The problems of his particular business may be specialized, but the common denominator of us all is the fact that we are American businessmen and as such are all faced with similar problems. I would like to lay aside those things that are peculiar to our special interests, and talk with you about some of the larger responsibilities which we all must share.

These responsibilities of 1948 to which I have reference are silhouetted against a background of social change that has been in progress for many years. This very fact of evolution in business and in the construction of our society brings to business most of its responsibilities.

Not so many years ago, the man who entered business in this country needed an idea, courage, some capital and a great deal of perseverance. He then settled down with his mind on his business, and if the components of his success formula proved adequate, his business began to prosper. He sold an ever increasing quantity of his goods in an ever expanding market, and his business grew, and he and others, in fact the whole country, prospered. America became flush with the goods of the world, and in three centuries we turned the wilderness that had been occupied by the Indians into a great country. Our villages gave way to cities and our civilization spread from the Atlantic to the Pacific.

The businessman grew with the country. He made new things, he made more things, and he made profits. For years he devoted his whole energy to developing his business and gave little thought to anything else. Each day he sat behind his roll-top desk, and made his plans and dreamed his dreams of still further economic triumphs. Rarely did he look out over the top of that desk unless—perhaps for selfish reasons—he became interested in some policy involving taxes or tariffs.

Today the businessman who hides behind the roll-top desk is as obsolete as is that venerable piece of office furni-



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ture itself. The day has long since passed when the American industrialist can concern himself solely with profits to the exclusion of all other problems. He has recognized the fact that many of the major problems of the present day are the result of the growth of business—business that he helped to create. The American industrialist knows, too, that he has a responsibility to help solve the problems of business.

And when I refer to this growth and development of business, bringing us up to 1948 and to our problems and responsibilities of the times, I do not mean to suggest or infer that we are on a broad plateau or that we have reached the horizon. Neither the horizons nor the opportunities are more limited, any more narrow, today than they were for the gentleman behind the roll top desk. In fact, we have horizons that are wider by far and opportunities that are vastly more plentiful. The very sociological changes we have referred to will of themselves offer broader fields for people generally.

The Industrialization of America

When America first began to industrialize, it followed the general pattern that had been laid down in Europe. The principal requirements of this industrialization were men, money and materials, and the logical place to obtain these was in the centers of population. Accordingly, the growth of cities and industries went hand in hand, and until the Gay '90s were well underway, neither business nor the country had any indication that this growth was anything but healthy. There had been periods of adjustment during which there had been a bad shaking of the capital structure, a rapid fall off in business, unemployment, and in fact, all the economic disasters associated with a depression, but none of these had lasted long, and in reasonable time the readjustment took place, and the country raced on its way.

By the fourth quarter of the last century, the situation began to change. More and more men were getting tired of the factory as it then existed, with its small wages, its long hours and its generally unhealthy and unpleasant atmosphere. In ever increasing numbers they were accepting the advice of Horace Greeley, for to the West lay a freedom of opportunity which to them seemed a way out—stifled as they were in the industrialized East. There was land—lots of it. There were railroads to bring the crops to market. The crowded cities were calling for wheat and corn and beef, and with it all Uucle Sam was offering inducements with homestead opportunities. And so many went West leaving behind them an ever tightening labor supply as the new farmers prospered and called on industry to produce still more goods.

It was then that we made overtures to the people of the over-crowded cities of Europe, and a new wave of immigration took place, and America continued to prosper and grow and become strong. Under our system of freedom of enterprise, yesterday's ideas rapidly became today's realities. More and more railroads were built, more steamships moved cargoes up and down our rivers and crossed and recrossed the oceans under our flag. We laced the country with a network of telephones, we built thousands of miles of highways, and millions upon millions of automobiles. We built entire cities in a matter of years, and factories that had started with very small beginnings found themselves first with hundreds and later with thousands of employees. In this country of ours we have seen the greatest mushrooming of civilization in the history of the world.

Prime mover in this great development has been American business—but it too has changed. No longer can the worker who thinks his opportunity has been stifled move to the West under the advantageous conditions of 50 years ago. Today he must either make the best of it where he is, or move on to another place which in most respects will be much the same as the place he leaves. The worker of today cannot shrug his shoulders and walk off to greener pastures. That is a thing of the past. It's different with the businessman too. He must now cope with what he once quickly forgot. Today a great percentage of our people are much more a permanent part of a community, they have been confronted with the realization that they must make their living there or nowhere. So our cities continue to grow, our schools become crowded, our church buildings are outgrown, traffic problems develop, the libraries become inadequate, public transportation strains under the added burdens, new water supplies are required, and power plants get overtaxed. Population increases mean more homes, and while cities wait for these, our people must put up with overcrowded conditions. The increased hazards to public safety call for more firemen and more police, and without green fields to play in, the children run the streets and juvenile delinquency increases.

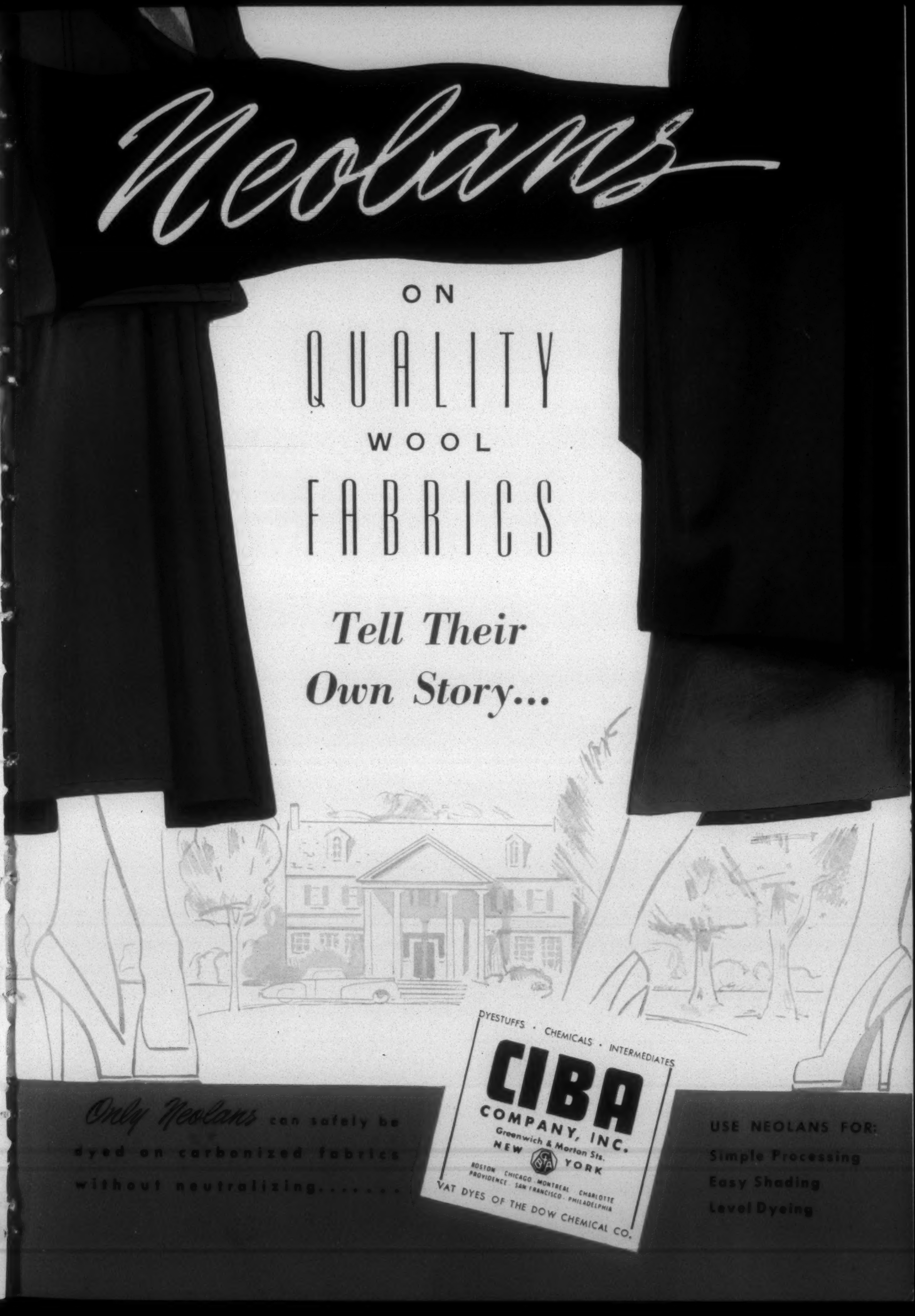
As populations grow we find further need for more hospitals and homes for the aged and infirm, and thousands of other problems that were never associated with the village. We find that our community has quickly become a huge complex civilization in which no man can be sufficient unto himself. We find a civilization where our personal well-being is inescapable tied to the common lot.

These conditions of which I speak exist in a greater or lesser degree throughout our country today. In the New Yorks, the Chicagos, and the Detroits, these problems have been existent for many years.

In the smaller cities, such as those in which most of us have manufacturing operations, these things are coming to also exist, although not in the same pressing proportions as in the major centers of population. Some of the problems have been enormously accentuated since the war. And as surely as our country, our South, must continue to grow in a fixed area, all of us in all of our communities can look forward to the development of stresses and strains upon our society.

Some of these problems and some of these responsibilities of businessmen spring from apparent neglect, poor judgment in public and community services, and from sheer short-sightedness on the part of our people generally. I blushingly point to my own native of North Carolina as it ranks in the field of public education. With crowded schools and with colleges and higher institutions of education fairly bursting at the seams from the rush of students, we nevertheless have here a state that ranks 39th among the 48 states of the union in our system of public education. The United States Office of Education is responsible for this rating. It is based on ten factors, such as teacher load, quality of teachers, money paid in teacher salaries, and so forth.

I digress to point with some embarrassment to the rank of my own state in the field of education in order to remind



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you that such a situation is a responsibility of business in North Carolina. What kind of business future are we building in schools where foundations for tomorrow are now being laid? Business men should, I think, give to that sort of situation—if it exists in their states—the same careful attention that is being given to the machinery and the materials of the future.

Many of us are serving on local boards of education and are interested in the problems of teachers' salaries and building facilities that face the local schools in almost every community throughout the country. Because our colleges are overrun with students, many of us are interested in various efforts being made to meet this situation. The textile industry has been very aggressive in helping with this problem through the textile school foundations at North Carolina State College, Clemson and Georgia Tech. Many of us are participating in various other foundations that have been established to aid our colleges.

This is our method of approach to the solution of problems here in America. Many solutions are still to be arrived at. But generally we are coming to give our young people more hope and greater incentive. In Europe it has been, and is, different. There the underprivileged, the have-nots, unable to see any possibility for bettering their conditions under a system that had not thought of them, banded together and the seeds of regimentation which are blossoming today were planted. The seething hordes of underprivileged, undernourished, and dissatisfied people there were the stepping stones for unprincipled leaders to rise to power and then to exploit, shackle and destroy all those things which we have come to look upon as being embraced in the dignity of man.

There are lessons to be drawn from the decline of certain societies and it is gratifying to note that an ever increasing number of alert and progressive businessmen are becoming aware of these lessons.

When the European cities were approaching maturity, the only things that were keeping pace with their growth were the slums. With the exception of a few enlightened people, almost no one was interested in seeing there were provisions to train more doctors to meet the demand of a rising population. Few in those days in Europe seemed to realize that more schools and more teachers would be needed if the educational level was not to be further diluted. Nowhere do we find that the industry responsible for the growth of this European civilization was taking anything but an immediate and selfish interest in the problems of the society in which it found itself. Its entire attitude was woven around opportunism and the exploitation of society for its own ends, and industrial leaders were totally unaware that the very things that had made them great would one day be their undoing. The businessman of Europe failed to recognize his responsibilities and in failing the people, he unwittingly contributed to his own eventual ruin. Europe today behind the Iron Curtain is the victim of most of these things of which I speak.

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In this world today it is a wonderful privilege to be an American businessman, but, as with any privilege, there are certain responsibilities. Daily and in increasing numbers the American businessman is meeting these responsibilities. He has come a long way from the day when the principal measure of success was the last figure on the profit and loss statement.

Today the forward-looking businessman is the forward-looking citizen. He has recognized the fact that his responsibilities include the promotion of the common welfare. He has learned through history and experience that his prosperity is closely tied to the general condition of the country and in these days of high speed transportation and almost instantaneous communication, he is becoming aware that his area of responsibility is extending to the whole world.

The American businessman—the Southern businessman, because some of America's best businessmen live and operate in these states—is now reaching for the opportunities to which he once closed his eyes. He seeks a better understanding of the people with whom he works. He makes his decisions with a view to the effect they will have on others. He has become aware that mass production can satisfy material wants, but that other satisfactions are still the result of the exercise of the human touch. The modern up-to-date Southern businessman realizes that the uneducated, the underprivileged, and the frustrated are threats to our American way of life, and he does something about them. He cannot be all things to all people, but it is a rare thing today to find a successful businessman who is not engaged in some activity to better the American way of life.

Yes, the businessman of today is meeting his responsibilities in a hundred different ways in cities and towns all over the South and all over the country. Some are concentrating their efforts on civic problems, others are active in a larger sphere. Each year thousands upon thousands devote untold hours to furthering the cause of education, because they know what I have already indicated—that education makes a solid foundation upon which to build a better future. Other businessmen participate in programs to provide better care for the sick, and for the aged. Still others devote many hours to combating juvenile delinquency, breeder of future crime. Today we find businessmen working for community chests, the Red Cross, the Boy Scouts, the churches, chambers of commerce, parent-teachers associations and in local, state and national politics. In the various communities where we live and operate our plants, many of us are called upon to serve on the board of aldermen, and we are making our contribution to a better local government.

In your plants, as in the plants of Burlington Mills, neighbors are working for neighbors. The interests of our people on and off the job revolve around making a better life not for just a few but for all of us. I was very much interested in reading recently a report on an extensive survey among employees of manufacturing plants on what influenced the employee most in forming his opinion as to whether a company is a good or poor place in which to work. To my surprise, high wages was number seven down the list. Considered more important than wages by the employees were the following items, in this order: interesting work, job security, interest company takes, chance for advancement, working conditions, and handling workers' complaints.

Our many relatively small plants located in various smaller communities, give as a decided advantage in our relationship with our employees. The fine feeling that exists today between management and labor in the South is due largely, in my opinion, to the fact that we have recognized that what an employee finds in his pay envelope at the end of the week is not all he expects from his job. Fair and courteous treatment and a human understanding of the employee's problems, are just as important as the amount of pay he receives. In such an atmosphere there can be a mutual understanding, and with it comes a team spirit and a general high morale that work together to make a better manufacturing plant in which to work and a better community in which to live.

Rising in America is a new concept in human relations, a new philosophy of business, and at the focal point we see a new man. While he is interested in politics, he is not a politician; while he is engaged in business, he is not solely a business man. He is a leader, the safeguard of our American way of life—he is an industrial statesman.

Mr. Cowan's paper is abstracted from an address he delivered before the Southern Furniture Manufacturers Association in June.

MAN-BUILDING POWERS

Employing People—The Problem and the Approach

Part Three of a Series by W. M. McLAURINE

THIS is an intensely scientific age. Science carries with it a desire for facts and the relations operating among these facts. Applying the statement to the employment of people, we suggest that the following facts are essential:

(1) His industrial experience.
(2) What can he do.
(3) His health conditions, character and habits.
(4) His economic status—debts—income—cost of living, etc.
(5) His industrial and social philosophy.

Below we quote a few examples of actual cases that were presented in a series of conferences that I conducted some time ago. These cases indicate careless employment. To discuss what they are would require much time and space. They are very suggestive and revealing:

Employed a spinner and she was a splendid operator, but she was always gossiping among the help and causing continual trouble. I had to discharge her. Could this fact have been found out in an interview?

Employed a man to look after the humidifier, and for a while he did good work. Later on, he became restless and dissatisfied and had to be discharged. It was found out that his wife was dissatisfied with village conditions. Could this have been averted by the proper interview in hiring?

An overseer in a Georgia mill employed a card grinder, and for a while he seemed to be an excellent fellow. Later, he became irregular and seemed to loaf on his job, was irritable when overseer approached him about his work. Finally, his health became so bad that a new man had to be employed. Was any fact overlooked in his hiring?

A family of man, woman, two boys and two girls, made applications to an overseer for jobs in the mill, representing themselves to be efficient in the several jobs for which they applied. After they had been given a promise of jobs and moved into the village, only three of them reported for work. An investigation of conditions revealed the fact that the group was not a real family, but a group of people living together in an unlawful manner. Could this have been found out in an interview when the people were hired?

Can anything be done to counteract the attitudes and actions of the industrial hobo?

A section hand was employed in a certain mill and was found to be a valuable man, especially as far as production was concerned. After being on the job some six months, he showed signs of having wrong attitude towards the management. It became necessary to discharge him and shortly afterwards several of the helpers who had been under him.

Overseer gave employment to a man as sweeper. He was given a house in the mill village. Investigation showed that his family, consisting of wife and three young children, was in want. The wife became seriously ill, and it was necessary for the mill to take charge of the family as dependents. Should overseer have avoided such a contingency?

An overseer employed a section man in a weave room and found that he soon came late to work. On rainy and bad days he was often absent. This mill had no village. An investigation revealed the fact that this man lived several miles from the mill and had to walk about a mile to the car line. Was there anything overlooked in hiring this man?

A man who was working in a mill became irregular and careless on his job. An investigation showed that he had a wife and several dependent children, none of which were able to work. The wife's health was bad, and they were not able to live on income of man. Was this man an asset, or a liability to the mill? Was overseer covering all points when he employed him?

A hand in the weave room was all that could be desired as far as his work was concerned, but was disliked by all the help with whom he came in contact. Conditions became so bad, it was necessary to discharge him. Could the proper interview have brought out this trouble with the applicant?

A young fellow of good appearance applied for a job as cloth room man, stating a line of experience in two of the best mills in the state. He talked intelligently about the job. He was given employment and was found to be very inefficient on the job. Was there anything wrong with the interview?

A young man represented himself to have same qualifications as above, was employed and began work and made good. He was highly satisfactory in every particular, but left because of the class of help employed. Was anything overlooked in employment policy?

A girl in the weave room, who did fair work herself, was of such a disposition that she hated any of the other girls doing as good or better than she. Investigation revealed the fact that this was a strong characteristic of this girl, and she had to move several times on account of it. Was the interview lacking?

The labor turnover in the picker room is very large. There is a continual stream of people coming and going every week. What may be the trouble?

The above cases are casual and doubtless the reader can think of dozens more—many of which he never analyzed or tried to find out the trouble. In discussing these cases, it is hardly fair to place all blame on poor employment as supervision plays a large part in the orderly or disorderly processes of production. A poor employment policy can be very expensive in the quantity and quality of production and can pose unnecessary problems of management on the supervisor.

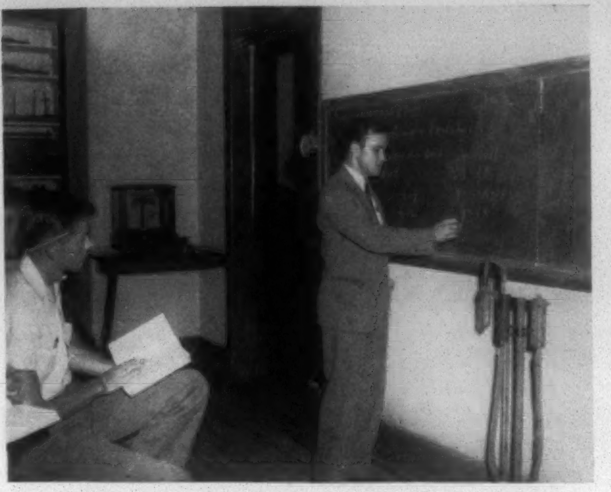
Labor turnover and the grievance and accident frequency are very strong determining factors in any industrial or business organization. Labor unrest is a very destructive characteristic, as every one knows. There are reasons for such conditions and scientific management says find the fact. Every employer of people must purge this policy from whatever qualities that it has that allows careless and indifferent or experimental employment.

Card Grinder To Rhodes Scholar

By HENRY LESESNE, Roving Editor, Textile Information Service

JOHN Q. HILL, a card grinder who is embarking upon three years of study at Oxford University, England, as a Rhodes scholar, never saw what a school room looked like until he was 11 years old. And it certainly was not a modern schoolroom, by today's standards. It was a country school in Cherokee County, South Carolina — a six-teacher, seven-grade rural school a mile and a half from where he lived.

But John somehow entered the fifth grade. He doesn't understand just how, to this day. The chills and fever of malaria had kept him out of school for five years, and he couldn't even write his name. Yet with the help of his



John Q. Hill, textile worker who won a coveted Rhodes scholarship, is teaching Summer school at Wofford College, his alma mater.

mother he had learned to read. That started him upon a quest for knowledge that eventually was to win him more than one scholarship. Even at 11 years old he'd done more reading than the average child.

"My teacher must have had the patience of Job," John will tell you today. "Honestly, when she started with me I couldn't even write my name." If, as he says—and beyond doubt he is right—the teacher, Mrs. Eloise Humphries, had the patience of Job, she instilled some of that quality into her pupil. For if there is one thing that John Q. Hill possesses, it is patience.

He's 29 years old now and he considers his education has just begun. Yet he's a "family" man. He's been married for ten years and he and his wife, the former Vonnie Lee Hilliard of Lyman, S. C., have a daughter nine years old, Lynda Dawn.

For three years he and his family will be away in England. They don't plan to come back until his study over there is over. After all, it costs a considerable chunk of money to commute across the Atlantic. The annual stipend of a Rhodes scholar amounts only to about $1,600. But when Hill gets back home in 1952 his education still will not be complete. There will be a minimum of a year—perhaps longer—at some American university, very likely at Duke. And then there'll be at least a year's internship at some hospital.

For you see, John Q. Hill, who progressed from farm boy to textile worker to scholar, has his heart set upon being a doctor. Along with physics and math, he squeezed in a pre-medical course at Wofford College, near home. At Oxford he will study physiology. Five or six years from now he will hang out his shingle. He'll be 35 then, an age when the average young man is already well established in the profession, business or trade he plans to follow for the remainder of his life.

Specialist? Society doctor?. Wealth? They have no particular appeal for John Hill. He says he'll be content to be a country doctor. No one can predict how the wheels of fate or fortune will turn, but right now there'd be nothing more appealing than to settle in South Carolina—maybe Lyman, or some place nearby, or like it.

For Hill came out of the red hills of the Piedmont and Lyman is a place close to his heart. Lyman is a small community between Greenville and Spartanburg and is one of the most modern and progressive industrial communities of the region. Pacific Mills in Lyman gave young Hill his first job and there he remained and settled down until he won the coveted scholarship that will give him three years of study in England at one of the world's famous universities.

When he was graduated from high school he went to work in Pacific Mills because his older brother worked there. (There is a remarkable story behind that older brother of his, but we'll get to that further along.) The hunger for knowledge imbued in the little farm boy a scant few years earlier was not dissipated by the fact he was holding down a regular job. Like other ambitious youngsters before him, he began working on the second shift.

Thus, by working from 3 until 11 p. m., he had time to continue his education. For a year he went to Spartanburg Junior College. Then he went to Wofford College in Spartanburg for a year. Then a year in the Marines. Then another year at Wofford. At Spartanburg Junior College he paid his own way out of his earnings as a textile worker. The first year at Wofford he had a scholarship. The second year at Wofford he was under the GI bill. He finished at Wofford last year, having made straight As on all subjects.

An average young man would perhaps have been satisfied with a college degree. Particularly if he were happily married, if he had a young daughter doing remarkably well at school, if he liked his job, if he made good pay. All these things were John Q. Hill's.

Still, since some time during his boyhood, he'd wanted to be a doctor. He'd won some scholarships already. Why not try for a Rhodes scholarship? The thought was tantalizing. Of course, it meant being away from his family. He talked it over with his wife. It would be difficult, of course, but it meant so much to them. He entered the competition, won the regional contests. Then he entered into the competition with contestants from a district comprising Virginia, the Carolinas, Georgia, Florida and Tennessee. There were three candidates from each state, or 18 in all. Hill was one of the six selected for scholarships.

Having been for several years a cotton mill worker by night and a college student by day, Hill in the succeeding months was a cotton mill worker by night and a professor by day. He began teaching at Wofford, his alma mater. On Mondays, Wednesdays and Fridays he would teach

Despite holding down two jobs—card grinder and college professor—29-year-old Hill finds time for relaxation with his family and, of course, his week-ends are free for recreation.

classes in math and experimental physics. The other two days he taught an adult class at Lyman—a rather small class, studying a hodgepodge of subjects.

A remarkable story, you say? Well, you tell that to young Hill and the chances are he'll shrug and say, "You ought to talk to my brother." If you knew that story, too, you'd say young Hill was making a characteristic understatement. This brother, now—it's the same big brother who was working at Pacific Mills when John finished high school. This older brother, J. M. Hill, was a loom fixer at Pacific. He didn't begin his formal education until he was 28 years, yet withal he couldn't be called a wholly uneducated man. For when J. M. did decide to enter school, he promptly entered the eighth grade.

Then, in 1942, he was graduated from Wofford College. Then he went to the Southern Baptist Seminary and also to Cambridge, where he studied philosophy. He was a chaplain in the Army. He's now pastor of the Tiger Baptist Church at Tigerville. He's still only 40.

There's a sister of the Hill brothers, Janett, who is a graduate of Converse College in Spartanburg and is a junior at the Medical College of South Carolina in Charleston. So John Q. Hill, the Rhodes scholar who began life on a wornout farm and then went to work in a modern industrial community, is not the only child of Mr. and Mrs. T. W. Hill to have been touched somewhere along the way by the spark that leads to achievement and a life of richness and service to humanity.

Neither is young Hill the only employee of Pacific Mills to achieve signal honor in the field of scholarship. A few months before John Q. won the Rhodes scholarship James E. White received an appointment to the U. S. Naval Academy at West Point. Last year at the University of South Carolina White, a freshman, made a straight A average. An appointee of Rep. Bryson (D.-S. C.) to Annapolis couldn't make the grade because of a physical disability. The Congressman heard of White's accomplishment and arranged a last-minute appointment to Annapolis. White, at the time, was back at his old job at Pacific working to earn sufficient funds to resume his education.

Opening, Picking, Carding & Spinning

THE MILL OF TODAY

By ROBERT Z. WALKER

Part Five—Air Control in Opening and Picking

THE control of air in the opening and picking rooms of the modern mill has been developed to a degree which is not generally realized by the casual observer. The introduction of air control equipment has been accomplished quietly and without arousing the interest such as is shown throughout the industry when, for instance, a new drafting system is first displayed. Perhaps the main reason for this lack of intense interest may be that many mill men regard the opening and picking equipment as standardized and unchanging; more probably, the recognition of new equipment has been taken for granted as the changes which have occurred are more in the nature of evolution rather than revolution. Important changes have been made but the steps toward the final end were gradual as design succeeded design, with each model of that particular machine succeeding where its predecessor proved inadequate.

There are two different phases of air control involved, together with the two different types of machines used to attain these ends. The first manner in which air is utilized in the opening room is as a means of conveying the stock from one piece of opening machinery to the next in the line, and to the picker room. The second consideration is to provide a method of cleaning the air in order to solve the old problems involved in exhausting the air currents from the conveying lines and to prepare fresh air necessary to maintain such air currents. Stock is carried along the opening line by air currents which are generated by fans that are part of condensers, while the air exhausted from these condensers is cleaned by passage through air filters. Condensers have been standard equipment for many years in contrast with much more recent adoption of air filters. A more detailed description and analysis will show the advantages which may be obtained by using this air control equipment and how such control is accomplished.

The older models of condensers were used solely as a means of making use of an air current and collecting the stock which was carried along by the current. The modern condenser is used in this manner also but has been improved in design to such a point that its use as a cleaning element in the opening line is of practically equal importance. This is borne out in practice as well as theory for many mills which were desirous of obtaining maximum cleaning have installed condensers at as many points in their opening line as possible, and have reported that the cleaning was superior in every respect.

The standard practice has been to install three condensers in the opening line. The first condenser supplied the air current necessary to pull the stock from the vertical opener to the first horizontal opener. The second condenser conveyed the stock from the opener and condensed it before supplying the second horizontal opener. The third condenser carried the stock from the second and last opener of the opening line to the distributor of the picker room. Today there are many mills which have added another condenser

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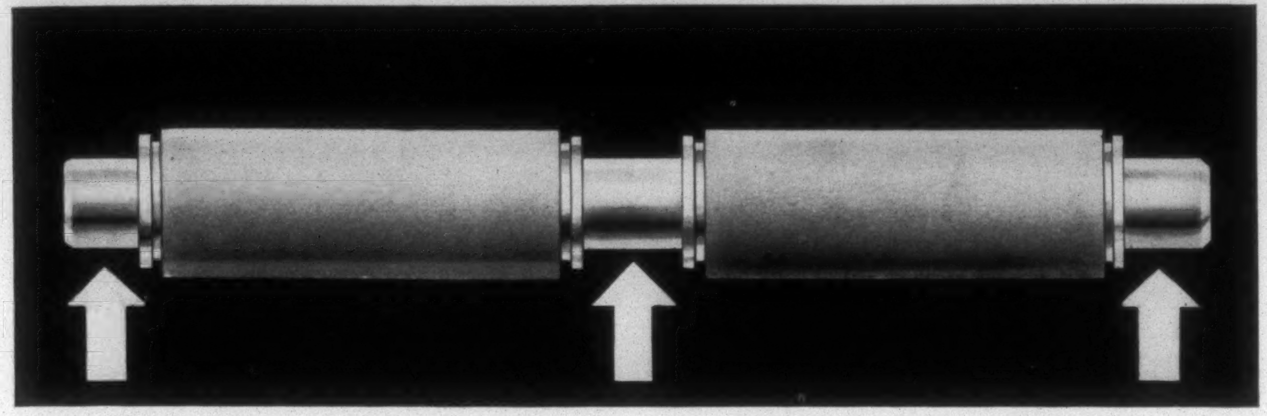

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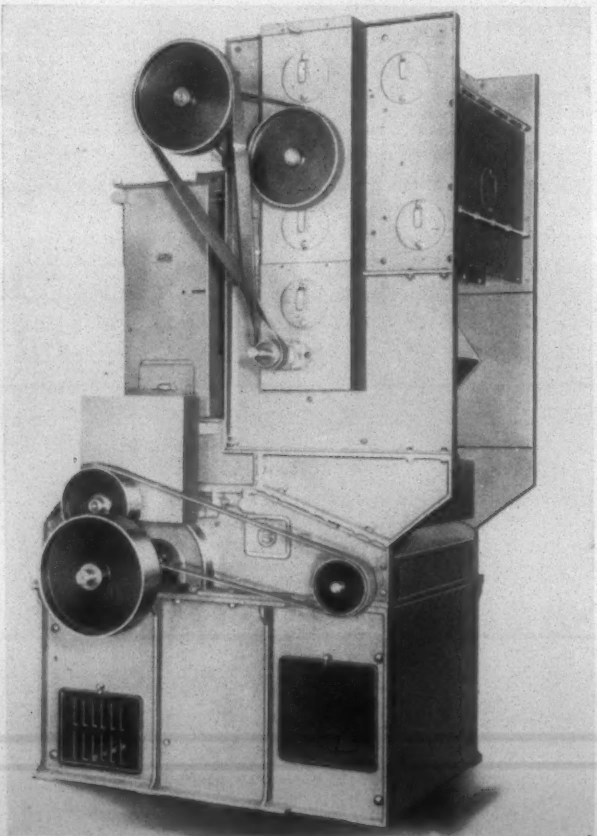
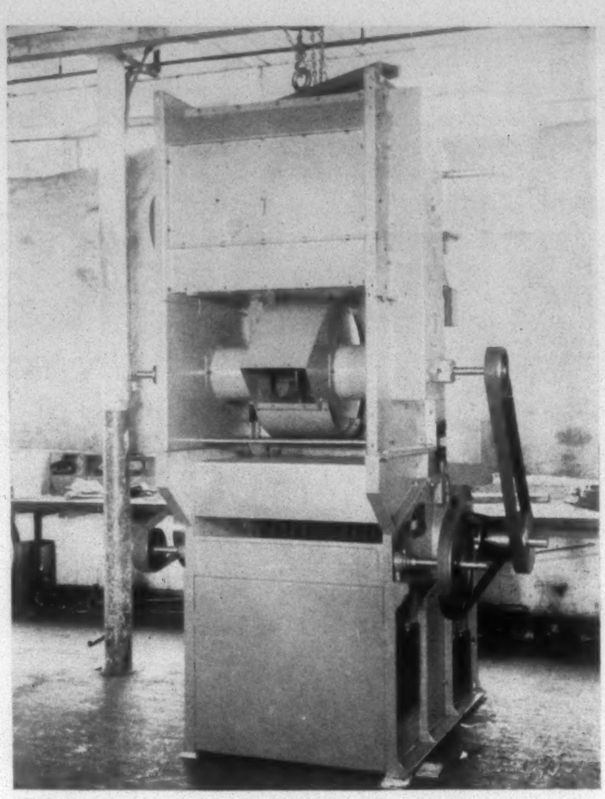
to the opening line, locating it so that the stock from the feed table would be collected by the condenser and then fed to the vertical opener. Inasmuch as the use of a condenser at this point is not absolutely required, the fact that mills have gone to the trouble and expense of making the installation must substantiate the claim that there is better cleaning accomplished. As this is so, the condenser must be regarded as another cleaning machine and not merely as equipment used only for conveying the stock from one part of the mill to the other.

There are several advantages recurring from the utilization of condensers as cleaning equipment. First, there is a more efficient removal of the smaller particles of foreign material from the good stock. As the stock is carried along through the conveying lines it is given a tumbling, rolling motion. The shaking of the stock causes the clumps of fibers to shake apart so that the individual fibers are loosened up. The more thorough opening then allows the waste matter formerly trapped in the clumps to be separated. There will be three groups of material in each clump of fiber; waste lighter than the good fiber, good fiber, and waste which is heavier than the spinnable stock. As the separation is accomplished while under the influence of an air current, the variance in specific gravity causes the lighter waste such as dust and lint to be carried forward faster than the good fiber. This light material is carried through the condenser screen and becomes separated as waste. The good fiber is carried along to the condenser screen at a certain speed while the heavier particles of waste move more slowly and will settle as waste whenever a stagnant air space is reached. The removal of dust from the surface of the fibers also causes the blooming effect which makes the fibers look more bright and lustrous. When an air return system is part of the opening equipment and the air is maintained at the proper conditions of temperature and humidity, the passage of such conditioned air through the conveying lines aids in bringing the stock to the proper degree of moisture regain and condition.



Modern condenser as feeding unit of horizontal opener.



Back view of condenser as feeding unit of horizontal opener, showing self-contained fan.

As extra cleaning is accomplished by the use of air, and air alone, there is not any danger of damaging the fibers. One of the great dangers in opening and picking is to have an excessive number of total beats per inch of the stock.

Opening and picking machinery must be adjusted as compromise between getting better cleaning at the expense of weakening the fiber and reducing the amount of cleaning to prevent fiber damage through excessive beating. Where fine yarns are spun the fiber strength must be high to maintain a high breaking strength and at the same time the yarn must be clean. In such cases as this the installation of extra condensers will aid greatly in achieving the two opposing objectives.

A great improvement which has been made in the design of the condenser is the unifying of the condenser system and the air current generating unit. The modern condenser is one unit combining both of these assemblies with one casing, a feature making the installation and maintenance much less of a problem as well as saving space in the room. Condensers of this type may also be mounted either vertically or horizontally without effecting the performance, so that the versatility of mounting is greatly increased.

The frame of the condenser is made of steel plate divided into two compartments, one for the condenser screen and one for the fan unit. The stock is carried to the screen section by the air current where it is held by the force of the air until stripped off by a doffer roll, which is a six-bladed roll having leather tips. The doffer roll generally rotates at

SACO-LOWELL MODEL SZ-2 SPINNING FRAME

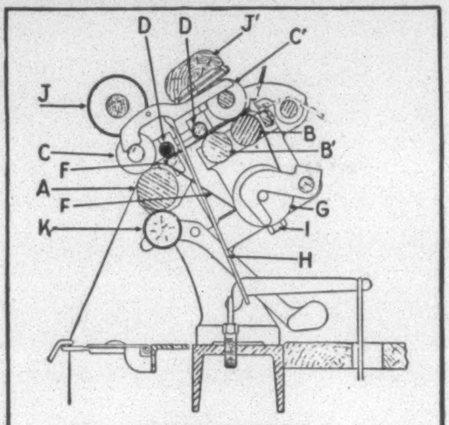
for producing yarns from
NATURAL and SYNTHETIC FIBRES

The following is a partial list of mills that are operating Z-2 drafting assemblies

Abbeville Mills Corp., Abbeville, S. C.
Amoskeag Fabrics, Inc., Manchester, N. H.
Bibb Mfg. Co., Macon, Ga.
Burlington Mills Corp., Ranlo Plant
    Greensboro, N. C.
Callaway Mills, La Grange, Ga.
Celanese Corp. of America, Cumberland, Md.
Clifton Mfg. Co., Clifton, S. C.
Dan River Mills, Inc., Dan River, Va.
Dana Warp Mills, Westbrook, Me.
Dora Yarn Mills Co., Cherryville, N. C.
Esther Mill Co., Shelby, N. C.
Excelsior Mill, Union, S. C.
Fabrica Del Hato, Medellin, Colombia
Glen Raven Cotton Mills, Glen Raven, N. C.
Glendale Spinning Mills, Hamilton, Ontario
Harden Mfg. Co., Gastonia, N. C.
Jackson Mills, Iva, S. C.
Jorge Hirmas, Santiago, Chile
Lakeville Mills, Fayetteville, N. C.
Laurens Cotton Mill, Laurens, S. C.
Mathews Mill, Mathews, S. C.
Meshi-Sacks, Tel Aviv, Palestine
Mooresville Mills, Mooresville, N. C.
Mt. Vernon-Woodbury Mills, Baltimore, Md.
Neuva Fibras, Toluca, Mexico
Ora Mill Co., Shelby, N. C.
Pacific Mills, Columbia, S. C.
Randleman Mills, Randleman, N. C.
Rhodhiss Mills Co., Rhodhiss, N. C.
Slingsby Mfg. Co., Brantford, Ontario
Watatic Spinning Mills, Fitchburg, Mass.
Waumbec Mills Inc., Manchester, N. H.

THE MODEL Z-2 DRAFTING SYSTEM

Is designed to process cotton, wool and other natural and synthetic fibres, alone or in blends.



Adjustable Model Z with Rolls Open

A Steel Front Roll, 1⅝" diameter.
B and B' Knurled Middle and Back Rolls.
C and C' Cushion Top Rolls, 1 9/16" diameter.
D Control Rolls.
E Apron.
F Nose Bar.
G Tension Pulley.
H Z-Type Saddle and Stirrup Assembly.
I Adjustment for Roll Stand.
J and J' Combination Top Clearers.
K Bottom Clearer.

SOME TYPICAL BLENDS

Scope of these Z drafting units is indicated by these five typical blends, which by no means include all the possible variations in stock or organization:

Mix No. 1. No. 30's yarn spun from a blend of
30% 2" 3 denier dull viscose
30% 1½" 1½ denier dull viscose
40% 64's 2" cut wool top
3.25 hank
Draft — 18.5

Mix No. 2. No. 24's yarn spun from a blend of
83% 3" 3 denier viscose
17% 3" 64's cut wool top
2.75 hank
Draft — 17.5

Mix No. 3. No. 25's yarn spun from a blend of
50% 2" 3 denier acetate
50% 2" 3 denier viscose
2.50 hank
Draft — 20.00

Mix No. 4. No. 24's yarn spun from a blend of
60% 2½" 1.5 denier viscose
40% 2½" 64's cut wool top
2.50 hank
Draft — 19.2

Mix No. 5. No. 25's yarn spun from a blend of
25% 2½" aralac
25% 2½" 5 denier acetate
50% 2½" 3 denier viscose
2.50 hank
Draft — 20.00

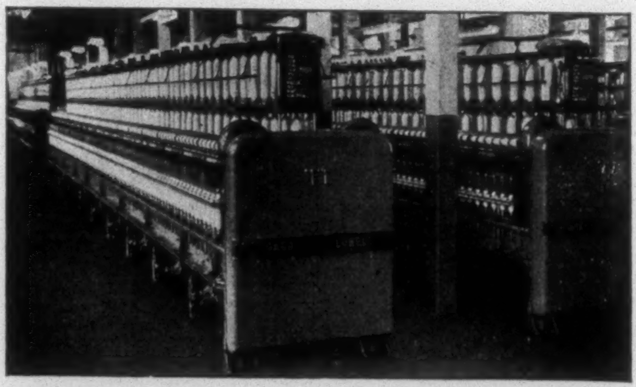
Flexible, Simple System!

All kinds of staples ranging from 7/8" to 3" can be drafted and spun on this unit by making a few easy and simple changes in gearing, roll arrangements, and settings.

You needn't experiment before going into synthetics. A good plan is to ask Saco-Lowell . . . for in designing the specialized equipment necessary to blend, prepare and spin these new fibres, Saco-Lowell has acquired a very practical working knowledge of their characteristics, reactions and correct end uses.

A consultation with our engineers will help you in developing a background plan to avoid unnecessary expense, needless delays and time-consuming experiments.

Ask your secretary to write our nearest Sales Office . . . today.



SACO-LOWELL Model SZ-2 INSTALLATION
in a New England worsted yarn mill

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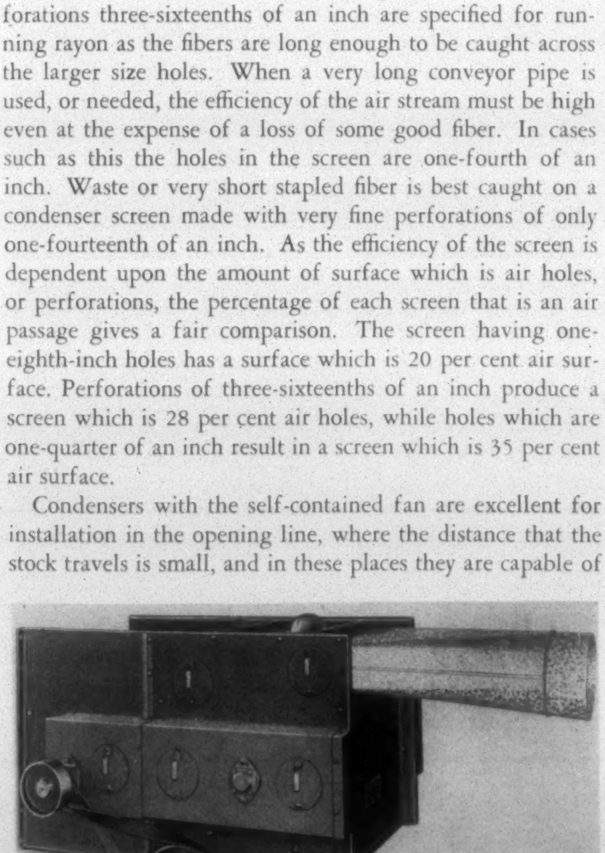
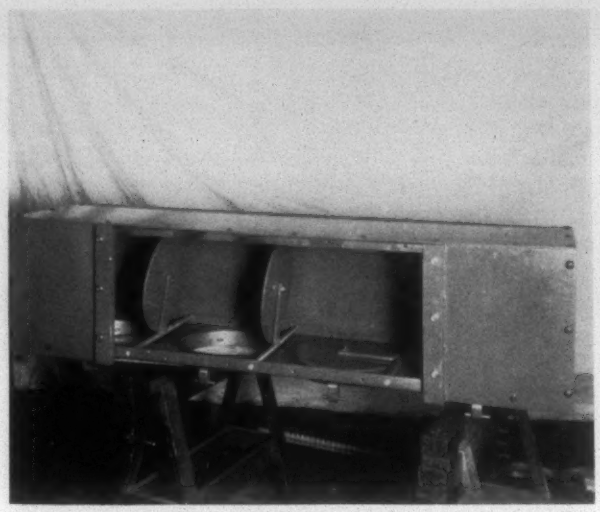
270-275 r.p.m., much faster than the movement of the condenser screen, and performs two distinct and important functions. First, the stock is knocked from the screen and delivered from the condenser. Second, the blow of the leather blade strikes the stock with sufficient force to knock loose from the good stock a certain amount of light dust and dirt which is caught by the fibers. This undesirable matter is pulled through the holes of the screen and carried away as waste. As the doffer blades are tipped with leather there is not any possibility of their damaging the good fiber.

There are five different screens which may be used to cover the condenser screen section, differing in the number and size of the holes making up the screen. The first of these is ordinary wire mesh such as was formerly in general use. This covering is not recommended today as it is weak and easily bent out of shape, or damaged, through heavy use. The other screening material which has replaced wire mesh is sheet steel perforated to the proper degree for a controlled passage of air through it. The size of the perforations and the number per square inch are determined by the conditions under which it will operate and the fiber which will be collected by it. The efficiency of the air stream is increased as the size of the perforations is increased. However, the danger of using oversize perforations is in the increase in the amount of good fiber pulled through them as waste. For ordinary purposes when cotton stock is processed the holes in the screen measure one-eighth of an inch. Perforations three-sixteenths of an inch are specified for running rayon as the fibers are long enough to be caught across the larger size holes. When a very long conveyor pipe is used, or needed, the efficiency of the air stream must be high even at the expense of a loss of some good fiber. In cases such as this the holes in the screen are one-fourth of an inch. Waste or very short stapled fiber is best caught on a condenser screen made with very fine perforations of only one-fourteenth of an inch. As the efficiency of the screen is dependent upon the amount of surface which is air holes, or perforations, the percentage of each screen that is an air passage gives a fair comparison. The screen having one-eighth-inch holes has a surface which is 20 per cent air surface. Perforations of three-sixteenths of an inch produce a screen which is 28 per cent air holes, while holes which are one-quarter of an inch result in a screen which is 35 per cent air surface.

Condensers with the self-contained fan are excellent for installation in the opening line, where the distance that the stock travels is small, and in these places they are capable of handling up to approximately 1,000 pounds per hour. The fan speed in such cases is usually 1,000 r.p.m. When the condenser is used at the end of long conveyor line the amount of stock that can be handled and the speed of the fan will vary in accordance with local conditions. The first factor having a bearing upon the weight of stock processed per hour is the amount of waste contained among the fibers. If there is a great deal of waste taken from the stock and pulled through the condenser this will cause a decrease in the efficiency of the air current. Second, the condition of the conveying lines will affect the condenser performance. Conveying lines which are not smooth on the inside catch fibers and cause constrictions which reduce the pull of the air current. This is also true whenever the line is laid out in such a manner that there will be sharp curves. Whenever it is necessary to make a turn in the line the curve should be as gradual as possible for an abrupt turn will disrupt the air current. Any disturbance of the current will cause a loss of velocity which may cause the stock to choke up the line and will allow waste to settle in the areas of low current velocity. Another cause of trouble in the line is condensation of moisture due to changes in the temperature between the air current and the pipe itself. If, for instance, stock from the opening line is carried through a conveying pipe to another building the warm air from the opening room hitting the cold pipe between the buildings will cool and form a condensate which will coat the surface of the pipe. Fibers will cling to the wet surface of the pipe to the extent that the passage of air and other clumps of stock will be restricted. A good practice is to have all of the conveying lines of this nature well insulated.


Condenser with self-contained fan.


Steel casing of bag filter, showing covers which can be closed to allow cleaning of bags without stopping the air current.

The built-in fans of this type of condenser should not be run over a maximum of approximately 1,500 r.p.m. If the exhaust of the fan is to a dust cellar which has ample space to prevent a back pressure the speed can be reduced several hundred revolutions under that of a fan exhausting to a filtering unit. There are not any hard and fast rules for the regulation of fan speeds and they will vary from 850 to 1,500 r.p.m.

The distance over which the pull of fans of this type is effective is also determined by such factors as the production and the condition of the stock and conveying line. A safe estimation would be to use a condenser with a built-in fan only if the distance of the pull is under 300 feet. For distances over this a condenser which has a larger fan is necessary. When the larger fan is used the fan unit will not be an integral part of the condenser assembly but will be located separately. The fan can then be mounted in a convenient close place and connected to the condenser by galvanized connections. The presence of white cotton, or good fiber, in the waste accumulations is an indication that the speed of the fan is so great that the air current is strong enough to pull good fiber through the perforations of the screen. If the fan speed is too low chokes will form in the conveying line and also the delivery of stock from the condenser will not be uniform.

Assuming that the mill has three condensers in the opening line, and a battery of three three-beater pickers, there will be at least 12 different fans running at high speed. There will be one fan for each condenser and one fan for each screen section of the pickers. As each picker fan exhausts 1,000 to 12,000 cubic feet of air per minute and each condenser approximately 900 cubic feet, it can be seen that there is a large volume of air being drawn through the fans and discharged at all times. The problem of handling this air properly was for many years a serious matter which was responsible for the lack of proper opening and picking.

The air needed to supply the air current generated by the fans was drawn from the room, passed through the fan, and then had to be discharged from the room due to the waste, dust, and lint which had contaminated it. It was not possible to discharge the used air back into the room because of the foreign matter present. Therefore the mill had a dust cellar into which all of the air exhaust lines were discharged. The dust cellar was not a satisfactory solution because of three main reasons. First, the dust cellar had to be cleaned out frequently of the collected waste and this was a very disagreeable job. There was also the danger of the fine particles of lint catching fire. Second, if the room was not large enough or if the waste collected for too long a period, the reduction in the effective dispersal area of the room would cause a back pressure against the fans. The back pressure would create operating difficulties throughout the opening line and at the pickers. A back pressure at the fan of the picker can cause the stock to collect on the screen unevenly so that the finished lap will be uneven. A series of uneven laps will produce yarn which will be uneven. Third, as the air is taken from the opening room and not allowed to be returned, new air must be taken into the room to supply the fans. The fact that new air must be brought into the room brings out a very important factor affecting the operation of the entire mill.

Cotton stock was always taken from the bale and conditioned for a period before being processed through the opening line. In years gone by the term "condition" was assumed to mean that the bale ties had been loosened, or the bale opened and laid out in order to allow the tightly massed fibers to loosen up in order to facilitate more complete opening. This same conditioning in the modern opening room implies that the stock has been laid out for approximately 24 hours so that the fibers can become loosened and also brought to the proper conditions with regard to the temperature of the fiber and the amount of moisture regain contained. Fiber which has been thoroughly conditioned and which is always processed at constant atmospheric conditions will make better laps, and better yarn, for the opening machinery and the pickers may be set to operate at maximum efficiency for the constant conditions.

When there is not any method of air return the old air is exhausted and the new air drawn from the outside of the mill. Under this arrangement it is not practical to maintain unchanging temperature and relative humidity of the large volume of transient air. In the first place, the high number of cubic feet of air flowing into the room is moving at too fast a space to control without an elaborate air conditioning system and, secondly, the cost of attempting to do so would be prohibitive. Also, the air passes through the section of the conveying line so swiftly that the full value of its conditioning would not be realized. That is why in the old mill the air of these rooms was hot and humid in the Summer and cold and dry in the Winter.

Cotton which is cold and dry will be harsh, brittle, and highly conducive to the generation of static electricity. The action of the beaters is apt to be more damaging than if the stock is more pliable. If the characteristics of the fiber change under different atmospheric conditions then it is necessary to change many adjustments and settings of the processing machinery in order to continue producing work of high quality. The installation of the return air system allows the mill to use the same air over and over again. When the air is re-usable it is then possible to control atmospheric conditions within close limitations and at a cost which is practical.

The return air system is composed of air filters handling the fan exhausts. Installation of the filters solves the problems of temperature and humidity regulation, the disposal of old contaminated air, and is a major factor in freeing the air of floating lint and other microscopic foreign matter which is injurious to the health of the operators.

The manner in which a return air system is organized is

A line of wire-mesh air filters.

Reduce

- **FLOOR SPACE by 50%**
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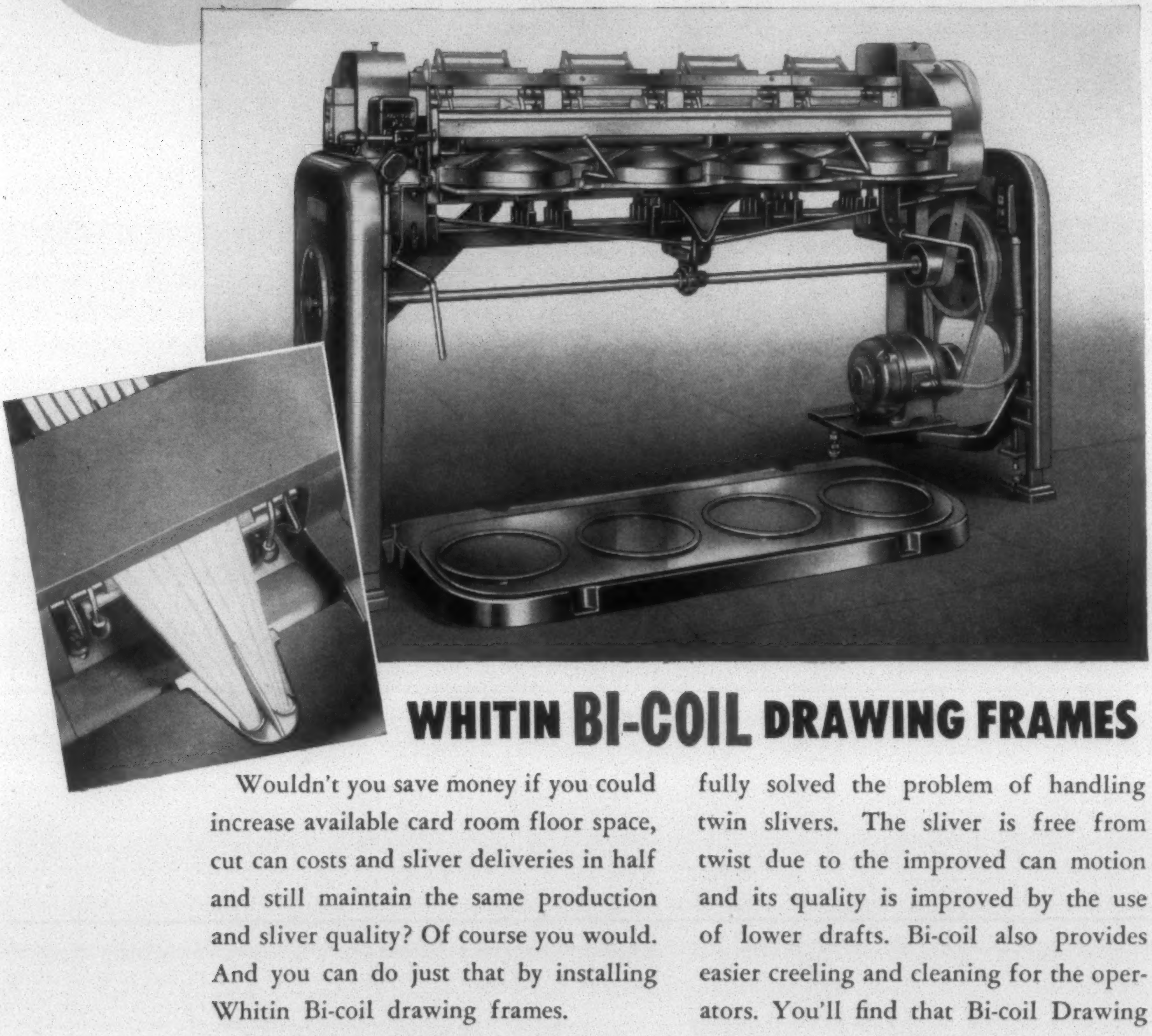

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Oscillating can tables, a patented feature of the Bi-coil system, have successfully solved the problem of handling twin slivers. The sliver is free from twist due to the improved can motion and its quality is improved by the use of lower drafts. Bi-coil also provides easier creeling and cleaning for the operators. You'll find that Bi-coil Drawing is a factor essentially important to your mill investments.

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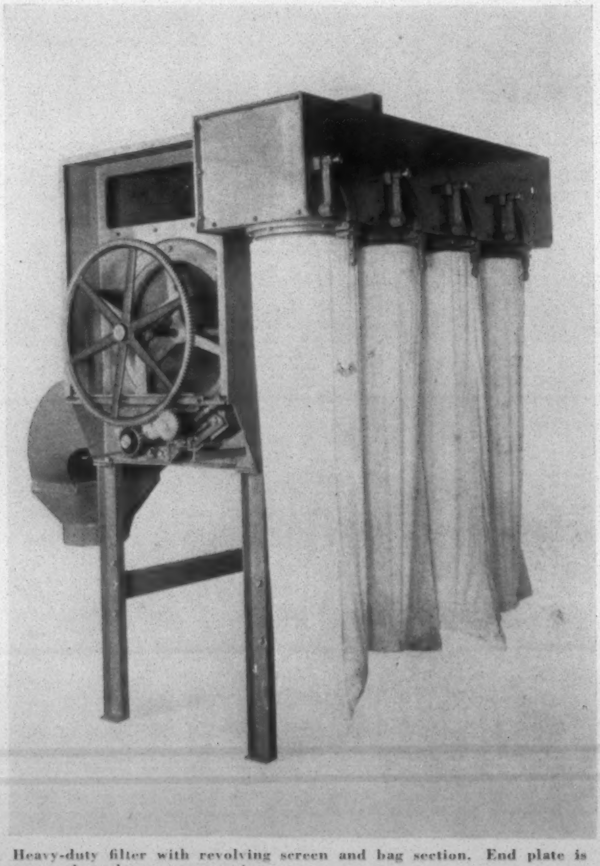
simple, now that the textile air filter is an accomplished and proven fact. The pipes from the fans of the opening machinery which carried the exhausted air to the dust room are eliminated and are replaced by short lines leading to filtering units. The filters are usually placed a short distance from the machine which it serves but the distance or position is not critical. As it is not necessary to locate the filter in any particular spot with relation to the opening equipment, the installation of these units to an existing opening line does not require tearing down the entire system. The filtering units may be placed at any point in the room, whether as an improvement to an old unit or as part of a new opening line, in order to make the greatest possible use of the existing floor space. The exhaust from the picker fans is also handled by filters but the design of these units is such that they are made an integral part of the picker. The filters are placed beneath the picker at each beater section, lengthening the over-all length of the machine only slightly.

The exhausted air from the fans is taken directly to the filter, processed through the unit, and then released back into the room. The released air is clean, and is practically of the same temperature and relative humidity at which it was drawn into the conveying line or picker. Tests have been made to determine the efficiency of these filtering units and in all cases the results have shown them to be satisfactory. Usually it has been found that the filtered air has had removed from it at least 90 per cent of all foreign matter, and this includes all of the microscopic particles of lint and dust. By using air filters the dust cellar is eliminated, much of the exhaust air pipes are done away with, and the danger of creating back pressure at the fans is greatly reduced. As the air is, for practical purposes, completely cleaned it is entirely feasible to use it over indefinitely so that the opening and picker rooms may be operated under stabilized conditions of temperature and humidity at a very reasonable cost.



Heavy-duty filter with revolving screen and bag section. End plate is removed to show screen section.

Textile filters are adaptable to various types of machinery which vary in the volume of air discharged and in the amount and character of waste matter contaminating the air. In order to meet all conditions at the least possible expense and at the maximum efficiency there have been designed and produced three classes of filters, (1) the wire mesh filter, (2) the bag filter, and (3) the revolving screen filter. Each type has a definite place in the mill and certain limits of capacity. The model of filter which utilizes wire mesh as the filtering medium is very simple in construction and operation and takes up but little floor space. The filter is made in the form of a steel cabinet with slits, or louvres, in the side to allow the filtered air to escape into the room again. Inside the filter are two wire screens fastened to the sides. The outer screen is made of fine wire mesh and the inner of coarse mesh. The screens serve as a base for the formation of a mat of lint and dust which is employed as the major filtering medium as it builds up between the coarse screen on the inside and the fine screen on the outside. The mat that is thus formed is capable of filtering out all but the most minute particles of matter.

As the air is blown into the filter the mat continues to build up in thickness. The thickness of the mat affects the efficiency of the filtering operation, for as the mat is built up the ability of the filter to trap smaller dust matter is increased. However, if the mat becomes too thick a back pressure can develop. There is some variation in the effectiveness of the filter. Whenever the air flow to the unit is stopped the mat drops to the bottom of the filter and can be removed. The capacity of the unit is relatively small and cannot be used satisfactorily when a large volume of air must be cleaned.

The bag filter is a more recent development and will handle a larger amount of air than the wire mesh filter. The variation in the cleaning accomplished is much less and the bag will trap the finest bits of waste so that the air which is returned to the room is much cleaner at all times. The bag filter is composed of a steel case into which the dirty air is discharged from the fan. The filtering units are the cloth bags hanging from the case either two or four bags depending upon the intended use. The bags are made from a very strong fabric which is closely woven and napped so that all of the foreign matter will be caught and held. The air passes into the steel case down to the bags and is cleaned as it forces its way through the bag to the room. The bags must be cleaned periodically depending upon the rate of production of the machine which is services, the type and quality of fiber used, and the amount of waste that is removed from the stock by the opening machine. Cleaning of the bags does not require stopping the opening line as each bag may be shut off independently and cleaned while the other bags continue to filter.

The capacity of this type of filter is not sufficient to warrant its use for the cleansing of air from either the fan of a condenser or a picker section. It does have one particular position in the opening room and that is to filter the air drawn from the feeders at the back of the opening line;

THIS IS NO. 70 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements
in winding equipment and new ideas in the winding operation

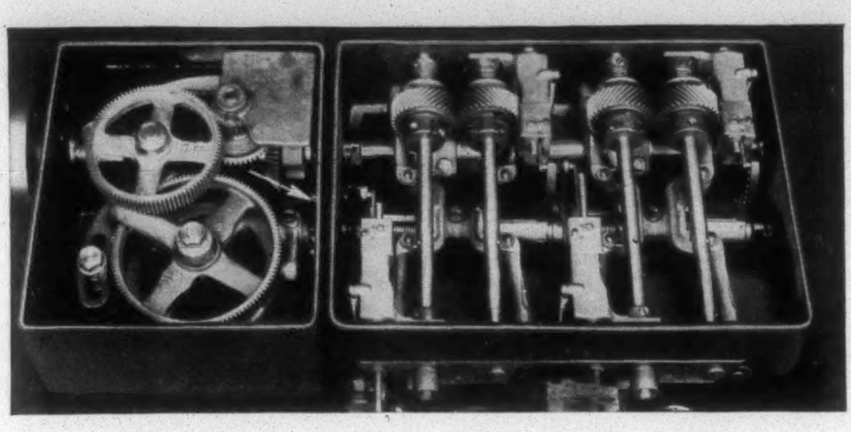


Fig. 1—Gainer case and frame showing connecting oil tube.

HOW HOT CAN OIL BE?

No. 90 Winding Machine

With the arrival of hot weather, many mills will become concerned over the heat of the machinery they are operating.

Ordinarily, excessive heat in a motor, bearing or machine is a good index of overloaded condition. But it should be remembered that the true indication of overloading is not the temperature of the equipment but *how far above the surrounding temperature* it is.

For instance, in a room where the temperature is 90 F, the average motor could not be considered overloaded unless its heat were above 160 F.

A case was reported to us where the temperature of the oil in a No. 90 machine was 150 F at a time when the surrounding temperature was in the neighborhood of 95 F. From checking with the oil company engineers we found that this was not excessively hot when compared to the heat in the room.

However, even though the oil may not be hot enough to impair its lubricating qualities or endanger the mechanism, it is possible to load the machine unnecessarily by the wrong kind of oil or too much of it.

We recommend a high-grade machine oil having a Saybolt viscosity of 120 to 140 seconds at 100 F. A lighter oil does not properly lubricate the machine; one that is much heavier, besides overloading the motor, causes the machine to start sluggishly in the morning. It also causes clutches to slip, and corkscrew bobbins result.

There should be oil in the bottom of each frame and the gainer case up to the level of the interconnecting oil tubes (see Fig. 1), but not above those points. This allows an ample reserve of oil to be picked up by the spindle driving gears and splashed throughout the interior. But if the level is too high, there is leakage out of frame covers, clutch levers, drive shaft, and even spindles.

Adherence to the lubricating instructions is necessary for the best performance of the machine.

HEAVY YARN TENSION Roto-Coner*

The standard disc tensions on the Roto-Coner* can handle satisfactorily everything from the finest to nearly the coarsest yarns. But when considerable density is required on the coarsest yarns, more tension is required.

The Heavy Yarn Tension uses two large porcelain discs held together by an adjustable spring arrangement. The adjustment is made by means of two knurled thumb screws above the spring. The lower one is the adjuster; the upper one a check to maintain the setting. Tension is regulated by the amount of pressure on the spring.

When the Heavy Yarn Tension is used, two pressure weights should also be used, so that pressure on the package will be in line with yarn tension. One weight is below the spindle holder and one above it. The upper weight when used in conjunction with the lower one has a counterbored hole that fits over the screw that holds the lower weight. If the lower weight is added, the pin should be removed from the upper weight, and a 3/8 in. hole drilled for a short distance to fit over the screw.

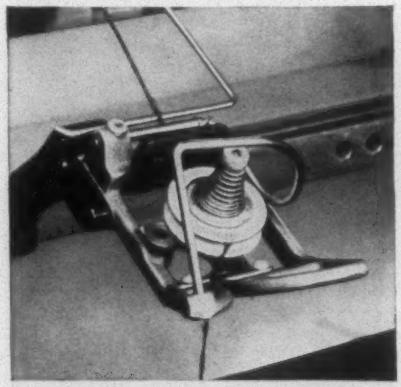


Fig. 2—Heavy yarn tension.

*Reg. U.S. Pat. Off.

July, 1948

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"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA CHICAGO LOS ANGELES MONTREAL and HAMILTON

one of the objectives in the installation of filters is to keep the atmosphere of the room free from lint and dust. The old type of feeder with an open hopper for feeding was a prevalent source of floating lint and dust in the air, caused by the shaking of the clumps of fibers as they were taken from the bale. The shaking and loosening of the feeder knocks from the loosened fibers a large amount of this light waste, and in the old model feeders this matter was allowed to rise from the feeder to contaminate the air. The newer feeders have practically eliminated this trouble by enclosing the hopper with a steel cover and a swinging door at the back where the stock is fed into the machine. The enclosure of the hopper does not allow the dust to escape so that it is necessary, or desirable, to provide a positive means of removing the waste to a place where it could not be carried into the air. For this reason, the modern feeder is equipped with a small fan at the top of the hopper cover. The fan creates an airstream which is sufficient to exhaust the waste from the hopper but which is not strong enough to make full use a large filter. Several of the fans from the line of feeders may be connected to one bag filter without creating any back pressure. The combination of enclosed feeder hopper, small fan, and a light duty filter has provided a means of ridding the opening room of another source of objectionable air contamination.

The above two types of filters operates in two entirely different methods of filtering in that the wire mesh filter utilizes the waste itself as a filtering medium while the bag provides the filtering agent without the necessity of forming a mat of waste. Neither type of filter will accommodate the volume of air which is exhausted by the large condenser used in the opening or by the fan of the picker. These fans are exhausted into a large filter which is designed to operate making use of both filtering principles. The filter is constructed so that the dirty air is first drawn through a large perforated revolving screen. The larger particles of dust particles are collected on the screen to form a mat which is employed as a filtering agent. The screen is revolved at a slow speed so that a mat of the proper thickness will be deposited at all times. As the screen is revolved the mat is stripped off by a pair of rolls and is dropped into a container as waste. Local conditions dictate the rate of speed that the screen will turn in order that a mat of the proper thickness will be maintained at all times. The proper speed will allow the mat to build up to the point of obtaining maximum cleaning of the air without creating any back pressure.

The screen has rather large perforations in order to allow for the passage of a maximum volume of air without developing back pressure. As the perforations are relatively large, and as the mat cannot be built up too thickly, there is a certain percentage of the finer particles of dust which will pass through the screen. In order to trap the finer waste matter the air is then caused to pass through a bag filter before escaping into the room for re-use. Four bags are used for the filtering of air from one screen section and are considered as an integral part of the filter. A filter of this type, first filtering out the heavier dust and then retaining the lighter matter so that neither section is over-worked, is capable of handling the exhaust from any fan found in the opening line. The air which is allowed to pass into the room is at least 90 per cent pure of foreign matter.

Sample of dust from air filter.

A filter with a revolving screen but without the bag section is used to clean air from the picker fans. The bags are not used due to the space which they occupy and because they are too tall to fit under the picker. In order to compensate for the lack of bag filters the mat on the screen is allowed to collect to a greater thickness. Pickers which are fitted with air filters should be fed with stock that is processed through an opening line having enough condensers and filters to remove most of the finer dust before reaching the picker. If the opening line does not clean the stock of a large percentage of the dust then the filters of the picker will not be able to operate satisfactorily as they will be overloaded and will create back pressures.

Back pressures of any fan must be avoided if the opening and picking of the stock is to be of high quality. The creation of a back pressure slows the passage of the stock through the opening line and through the beater of the picker. This can be the cause of curling of the filters and of fiber damage due to over-beating. Back pressure at the screen section of the picker causes a disruption of the air currents carrying the stock to the screens from the beater and will produce laps which are not uniform in weight, are uneven in density, and which will not hold together properly.

Back pressure may be the result of overworking the filters or of poor adjustment but it may be due to carelessness in maintaining a proper cleaning schedule. The bag of the bag filters should be cleaned out and the waste removed before it takes up too much of the air space within the bag. Another point which is often overlooked is an examination of the piping from the fan to the filtering unit. A drop in the velocity of the air current, caused by a sharp turn or a change in elevation of the line, will allow the settlement of waste. A small amount of settled waste will create an eddy current which will trap other dust until a collection has built up that is sufficient to slow down the air current as a whole. When this happens a back pressure has developed, although it may have taken place over such a period of time that the deteriotation of the operating performance is not readily noticeable. Filters, like all other cotton processing machinery, must be properly adjusted and cleaned if they are to perform at the utmost efficiency.

Warp Preparation & Weaving

EVOLUTION OF AN IDEA

Part Six of a Series by H. E. WENRICH

MODERN manufacturing has grown enormously complicated. Changes take place overnight. Each day some new project bursts out in a glory of publicity releases. What was new-fashioned as of yesterday is then brushed with the cobwebs of antiquity each succeeding hour. In this land of free enterprise and ready opportunity where the buyer is king, constant changes are necessary to satisfy the king's desires and needs. And as the buyer's taste dulls, interest must be re-aroused to the avid point of satisfying his wishes for newer adventures in good living.

Newer adventures in good living covers vast territory; it may be that new model car; a taste thrill of some newer refreshing concoction; a green flannel cardigan for basking in the sun at Palm Springs, Cal., during the annual men's wear rodeo out yonder—or it may that new Kellogg loom.

One of the most outstanding achievements in the textile industry was previewed in the early part of 1948 by many textile men. This new loom that attracted wide attention was introduced by the M. W. Kellogg Co. Not only new in engineering, color dynamics has been added to make the machine brighter so the weave room will be more pleasant and alive to work within—breaking away from the dull greens and bringing the machine to new beauty with a predominating blue.

Of course, we have the old standbys on existing looms, and the new loom follows some of the principles of the old motions and methods. The picking motion of the cone type is a familiar motion to thousands of textile workers, but the method of making repairs is unusual. There is no need to get down under the loom to remove a broken part from the bottom shaft, as the picking motion works on an entirely different arrangement.

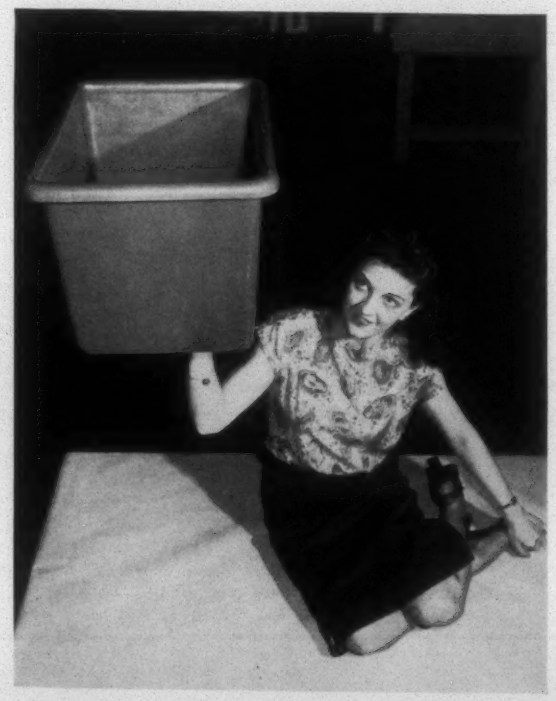
The Kellogg weaving machine is the result of the company's metallurgical research and experiences during the past war and their searching studies for new fields of endeavor to keep its supervisory staff and workers busy in the post-war period. To say that the company has succeeded in its quest for the loadstone would be far short of the actual facts.

The new loom has been operated at 285 picks per minute, but only as an experiment. The speed for general purposes as recommended by the firm is between 220 and 230 r.p.m. The present models go no further than 46-inch width cloth woven in tabby, twill or satin limited to six-shaft work and under. At present, there is no need for other models, as the backlog of orders will keep the loom division busy for a long period of time on the models now on the assembly line. Future models of course will cover the needs of all fabric manufacturers.

Even with the far superior advancement of ideas built into this new Kellogg loom, from time to time, other mill men working on the loom during weave room operations will conceive many new ideas to further the loom's possibilities. With each new idea that proves of any value, small or large, will go a share in making better living for the workers in the weave room, or the buyers', eventually wearing the product off the loom. As the textile manufacturer appraises the advancement of new machinery with pleasant surprise, the buyer in turn will have his share of adventures in fulfilling the quest for something more modern.

Steel Tapes and Textiles

Everyone is familiar with steel rule tapes. The original pocket tape proved a sensation in its time and proved to be popular. Other eager-beavers devised steel rule tapes, until



VERSALITE, unique thermoplastic material produced by United States Rubber Co., is used in this deep-drawn tote box for the textile industry. The tote box, which is 24 by 15 by 15 inches and one-quarter of an inch thick, weighs only ten pounds, is smooth in finish, easy to clean and extremely tough. Versalite, according to the rubber company, can be formed into regular compound shapes as large as five by ten feet and can be made in almost any thickness above .020 of an inch.

today, chain stores, hardware, garage, drug store, newsstand and nearly every corner grocery is super-saturated with steel tapes. Tapes retail at prices from $2.50 each and down to less than $1 per dozen!

Mr. Textile Manufacturer, are you in a rut with $1 per dozen tapes? Has your line of bright, *old merchandise* placed you in a dilemma by yellowing on the shelves? With three million babies born each year in our United States, are you satisfied with your law of averages for business from newly apprenticed mechanics, or are you making revolutionary progress with that new product? Or, are you in doubt that there is always a market for that something new under the sun—and if you lack that something new, do you lack the imagination necessary to dress up that old product in a new look so as to put it over in a big way?

Your new look may be "crack-pot" but, have you ever hefted a Langley fisherman's "De-Liar?" What a little gadget—just cuddles nicely in the palm of your hand. But Langley's idea of combining two old, but useful devices, although appearing as a half-baked idea, really hit the jack-pot. The possible market for a combination steel rule tape and weight scale is our outdoorsmen of 20 million fishermen! Even midgets go over in a big way if they are correctly designed and carefully tuned with the march of time. Textile markets? Plenty in any sport line; but tickle the black ink on your ledger with fishermen's accessories such as worsted sweater with raglan shoulders; water repellent fabrics; sleeveless wading vest splattered with pockets, and some new type of shoulder bag that is rubber lined or what have you. There are very few fishermen who can resist some new form of contraption or some tricky gadget if it fits within their scheme of better living.

U. S. Testing Co.

For better living? Just ask Allen L. Brassell, president of United States Testing Co., Inc., 1415 Park Avenue, Hoboken, N. J., or Chairman of the Board D. E. Douty, what their conclusions are for better living, and they may spring this one on you, "Don't try to fool the buyer with misleading claims!"

The connections between new ideas progressed into better living and misleading claims fit together like jig-saw pieces; and any one individual of several hundred U. S. Testing associates could tell you this is not theory, but fact.

And to further convince any doubting mind, the vast resources, six branch offices, five industrial laboratories, three retail laboratories, ten sampling stations scattered the depth and width of America, plus the five-story, block long home building in Hoboken of the U. S. Testing Co., is ready to fact-find information on any conceivable subject. Here, everyone has the enthusiastic energy to push ahead tests on everything that's new, and to make the thousand and one rigid tests on the old as well, to keep it from breaking out in misleading rash.

Good things expand and U. S. Testing is excellent proof of the successful advancement of an evolution of an idea. Started way back thar' in 1880 for the conditioning of silk, it is today recognized as one of the largest independent testing and research laboratories in the world. First came the idea, a start was made to put the idea into everyday practice, and the conditioning of yarn eventually brought better grade yarns to fabric manufacturers. This, alone, would have been ample reward in the achievement of one man's imagination. This, alone, has brought better working conditions to thousands of textile workers and better products made from improved yarns; but rather than rest upon accomplished eminence, the company pushed on into other fields within the following 40 years, and since 1920 rapidly grew into a juggernaut capable of striking the death knell to any piece of gaudy merchandise.

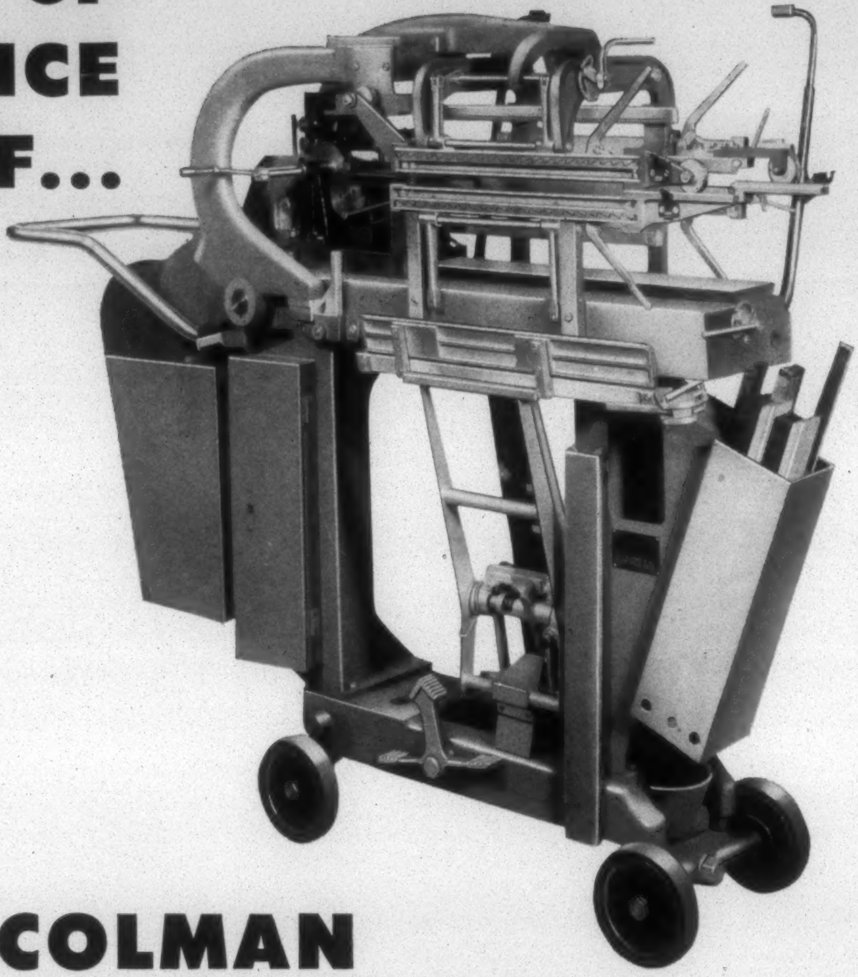
The company's roster of scientific personnel reads like a Who's Who in nearly every line of manufacturing or scientific project. Raw materials, solids, liquids, gaseous, gems, germs or atomic puzzles are all unearthed by accurate scientific methods. No hokus-pokus, but tests based on the most mathematical precision methods known. This saves the buyer's money, but what is more important from the customer's viewpoint, it may save the customer his business even if tests show his product is a "phoney." In fact, there are many textile plants that are thankful an idea on condition of yarns lead into the silk-testing firm that expanded into an over-all fact-finding enterprise. It was not unusual for a few shady throwsters to water-weight thrown silk, for silk at $6.75 per pound made a handsome return if loaded down with about ten to 20 per cent more H^2O than allowable moisture content.

One large weaving firm doing commission weaving had several thousand pounds of five-thread 60/65 turn silk crepe in storage for a fancy weave using the yarn both warp and weft-wise. A few thousand pounds had been warped up and in weaving, when the superintendent, on his usual jaunt around the departments, chanced by the quilling room when several cases of the yarn were being opened to place into work. The bobbins and yarn were covered with fungi, indicating excess water loading that had moulded and dried out during storage. Immediately, several unopened cases with seals intact were shipped to U .S. Conditioning House —as the testing company was known at that time, and production slowed down to keep most of the yarn in storage awaiting outcome of the various tests.

The net result of the test on watered silk showed up to the throwster's disadvantage, and rather than go through legal proceedings, arrived at the conclusion that here was one weaver who would not be gypped; revising the total weight to conform with the test figures. Absolute accuracy in testing, regardless if favorable or unfavorable to the client, has earned the testing company a host of clients and is their priceless asset in a well-earned reputation. In the textile industry, U. S. Testing has branched from the testing of silks to the testing of every type of yarn and its finished product. By determining strength, dye affinity, elasticity and many other factors governing quality and production, the price and marketability of the finished product can usually be fixed previous to processing the article. The company will even go further, and market survey the product, providing, of course, that the product will pass all tests made according to the advertising claims. Bed sheets; they better be good, for the Serigraph testing apparatus will determine tensile strength. Other tests include yarn slippage, shrinkage and every conceivable test to make sure the product is as good or better than the manufacturer's claims.

What happens in the "torture chamber" to innerspring

45 YEARS OF EXPERIENCE IS BACK OF...



BARBER-COLMAN WARP-TYING MACHINES

REPAIR PARTS AND SERVICE MEN AVAILABLE PROMPTLY

The shop pictures above and below show a few of the skilled mechanics whose experience and aptitudes contribute vitally to the quality and performance of Barber-Colman machines.

No machine made can function without Service. That is why, since the inception of Portable Warp Tying Machines forty years ago, Barber-Colman has backed these machines with two important Service Departments. One is Repair Parts and the other is Service Men. Repair Parts makes, puts in stock, and delivers the pieces and assemblies that wear out from time to time, and need to be replaced quickly to keep the machines operating. Service Men are skilled and experienced individuals, available on short notice from strategically located centers, who are trained to diagnose quickly the ills of any machine, make necessary adjustments or replacements, and revitalize its productive functions. The forty years of experience which backs the performance and visualizes the developments of Barber-Colman Portable Warp Tying Machines could easily be nullified by inadequate Service. That is why, when you use Barber-Colman equipment, you can be sure you have *good* machines that can be kept operating easily at top efficiency.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.
FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND

mattresses, happens to every conceivable textile product as well as other lines of articles. If no known testing method is available, company associates think up a gadget to fit the need. The roller device seen in numerous advertisements will make short work out of any rag mattress, and other odd contraptions are ever ready to show how quickly they can rip, chew or crush some beautiful product to smithereens. Some things require testing to find wearing possibilities, such as bobbin spindles, spinner tape, lug straps, shuttles and other supply parts going into the various needs for the production of yarns and fabrics. A textile plant may play around with such tests for many months, wasting precious time before a final conclusion as to the merits of the articles can be determined. With U. S. Testing, months and years are decimated into minutes and hours when their "gadget-happy" specialists come up with new approaches in tearing the prized article into fragments fit only for the debris.

You, too, can be gadget-happy. But as there are numerous industrial and university research laboratories scattered across the nation in addition to several private enterprises, the average individual bests by improving some article he is best acquainted with. This is not always true, however, but is more sure-fire. All around us are adventures in good living, and whether you come up with a razzy gadget for the C. & K., Draper, Kellogg or Hunt loom, or devise a new testing apparatus, or a snazzy article for rugged families making week-end junkets to sniff the fresh air in the great outdoors, your idea may find that special place to fit into everyday need.

Only you, and you alone, can sketch in words or on paper the imagination of your mind. At times, bringing imagination into reality requires much hard work and many fallow hours, but anyone with a streak of stubbornness can do it. When an idea fails to click, be stubborn and keep trying—try a new approach if necessary and the dream will take root. That better job, that better plan, that better article, offers new adventures in good living, and can be obtained and progressively advanced by the evolution of ideas.

Preparation Of Size Mixes

By LEE H. ELIZER, Chemical Service Laboratory, Charlotte, N. C.

THE purpose of slashing is to prepare the warp for the loom. After the cloth has been made the sizing is usually removed. Therefore warp sizing preparations must be easy to apply and easy to remove and do an effective preparation job for the loom.

The basic ingredient of size preparations for cotton goods is starch. The starch is cooked with water and the warp is passed through the hot size, dressed off by squeeze rolls and dried on steam heated cylinders. The size must be thin enough to penetrate the yarn somewhat and cement the fibers together that previously had only been held together by friction. This considerably increases the breaking strength of the yarn.

The size must be viscous enough to coat the yarn, imbed the extending fibers and keep them out of the way as much as possible. It is these extending fibers that present a real challenge to the sizing technologist. The size is not particular which fibers it binds together and as the sheet of yarn passes through the size, extending fibers of one end that touch the extending fibers of an adjacent end are bound together, and each end in turn is bound to the adjacent end. Thus the sheet of yarn no longer consists of distinct ends, but is more or less continuous from selvage to selvage.

Before the sheet of yarn may be woven each end must be in itself a distinct entity; therefore the fibers between adjacent ends that have been glued together by the size must be broken. For this purpose lease rods on the back of the slasher are employed. Usually the glue line is as strong as, or stronger than, the fibers which are glued together, therefore one fiber must break and the other is subjected to a strain. This disrupts the starch film around the ends to which the fibers are attached. Some thinkers believe herein lies the cause of slasher and loom shed.

Native starches and modified starches from ten to 40 fluidity are used for warp sizing. The concentration varies from a few ounces to a little over a pound to the gallon, depending upon the job to be done. A granule of starch has very little adhesive value; therefore it is necessary that the temperature be high enough, cooking time long enough, and the agitation violent enough to thoroughly disorganize the granules so that the maximum adhesivity can be obtained from a pound of starch.

The whole purpose of modifying a starch is to increase the concentration and yet maintain the viscosity in the range for good sizing. A granule of starch is a giant molecule, the monomers of which are joined by acetal and semiacetal linkages. As these acetal linkages are unstable in acid solution a good way to make a thin starch is to slurry it in .1 normal acid. A fluidity up to about 90 may be achieved in this way. This is usually done at the refinery.

Another useful way to thin starch is with enzymes. Here the starch is gelantinized and a temperature of 160° to 180° F. is maintained for a few minutes while the liquefying enzymes make smaller molecules out of the giant starch polymers. The pH must be maintained around 5 or 6 for malt enzymes and about 7 for mold enzymes.

Oxidizing agents are also used to thin starch. At the refinery the starch may be slurred with hypochlorite solution. The pH is slightly alkaline and the acetal linkages are stable. The polymer is fragmented by dialdehyde formation which scissions the glucose residue between carbons two and three. At the same time other easily oxidizable groups as primary alcohols and aldehydes are being oxidized to carboxyls. The end products are quite different from the acidic and enzymatic modifications.

Sometimes the size maker must make his own thin-boil-

FROM 1,768 LOOMS . . . .

544 more yards per hour!

SPREADERS

PATENTED HUNT SPREADERS GIVE 11% LOOM SPEED INCREASE TO BIG SOUTHERN MILL!

Installation of Hunt Spreaders and an overhauling job done right on the weave room floor in a North Carolina Mill* have made possible 11% increase in operating speeds of 1,768 looms. Weaving 80 x 80 goods this increased speed would give 544 yards greater output per hour for the 1,768 looms!

Amazing, you say . . . and it is indeed amazing.

And yet, results equally gratifying are being reported from Hunt Spreader installations in many, many other mills in all parts of the industry.

The patented Hunt Spreader assembly braces and strengthens the loom frame, adds extra bearings to crankshaft and camshaft. It is made in sizes to fit practically any loom. Hunt's skilled erectors can make installations easily and quickly on your floor, with a minimum of interruption to present operation.

Have you considered the advantages of adding Hunt Spreaders to looms in your weave room?

Would you like specific information about cost and availability? If so, please write, wire, or phone us.

Plan now to attend the Southern Textile Exposition in Greenville, S. C., October 4-9, 1948. Hunt Spreaders, Hunt Certified rebuilt looms, and other Hunt textile machinery improvements will be prominently displayed.

*Name of mill on request.

HUNT MACHINE WORKS, Inc.

200 ACADEMY STREET TELEPHONE 2-5681

GREENVILLE, SOUTH CAROLINA

ing starch from native starch. He has a choice between enzymes and oxidizing agents. If he chooses enzymes he must be careful that the pH is favorable for enzymic action; that the temperature is high enough that the starch is opened, but not so high as to destroy enzymes before the starch has reached the desired fluidity. When the desired fluidity has been reached the enzymes are quickly destroyed by raising the temperature to the boil.

If the size maker chooses an oxidant, he must be careful not to add other easily oxidizable substances until after the desired fluidity has been reached. Quite often sodium perborate or barium peroxide is used. If the size kettle is copper-lined the fluidity of each kettle will vary until the copper oxide film that lines the copper becomes constant. The size maker would have fewer headaches if he prepared his oxidized sizes in kettles that were not copper lined.

As the temperature of a size mix consisting of just starch and water approaches the boil there is a tendency for a tenacious foam to be produced. The size maker may eliminate or greatly reduce this foam sometimes by the addition of a small quantity of electrolyte as calcium chloride. If this does not work, then a little light mineral oil may be added. If the temperature is slightly lowered, the foam is sometimes greatly reduced. The most troublesome foam is that produced in the size box as the sheet of yarn passes under the immersion roll. If foam is allowed to accumulate here there is a very uneven size distribution on the warp and consequently loom efficiency will drop. This type foam quite often may be greatly reduced or completely eliminated by raising the immersion roll. The pickup of size by the warp is usually not affected.

A warp sized with starch alone will stick to the drying cylinders. To overcome this fats and oils are added. Since one of the requirements of a good size is that it be easily and completely removed during the finishing operations, some size technologists prefer to use only saponifiable fats and oils and waxes in the size kettle.

The hydrogens and oxygens of the starch molecule are quite reactive. The oxygens may react with the hydrogens of its own starch molecule or they may react with the hydrogens of a different molecule such as water. The same is true of the hydrogens and oxygens of water. In fact at room temperature most of the oxygens of water are bound to hydrogens of other molecules of water, making a long chain. In a granule of starch most of the oxygens are bound to the hydrogens of the same molecule and consequently a granule of starch is not useful as an adhesive. As the temperature of a starch slurry is raised, the hydrogen bonds of the giant water molecules begin to break and the chains become shorter and shorter. As the heat penetrates the granule the hydrogen bonds of the starch molecule begin to break and before they can form again the hydrogens of the short water chains have replaced the hydrogens of the starch molecule and hydration of the granule begins. The granule first swells and then bursts. It is at once evident that the whole purpose of cooking the starch slurry is to decompose the hydrogen bonds between oxygens and hydrogens of the same starch molecule. It is well known that fats and oils retard the hydration of the granule, which in turn decreases the adhesivity of the size. Therefore, fats and oils and waxes should be added toward the last of the cooking period. In fact one very successful sizing technologist applies the fats and oils to the sized warp between the squeeze rolls and the dry cans. This gives a much more hydrated size with maximum adhesive value as it is cooked without fats. Weaving can be accomplished at a lower humidity and loom efficiency in nearly every instance is increased.

Due to variations in local conditions and perhaps other reasons Southern mills have not taken to unit sizes. They prefer to buy their starch and the softeners and waxes and make a size to do a job in that particular mill. Starches from any of the reliable suppliers are about the same quality and can be bought in any desired viscosity and are fairly well standardized. Compounds vary considerably. A compound manufacturer studies each customer and tries to tailor a compound out of fats and starch and gum and preservatives and defoamers and waxes to suit the customers need. The compound business is a sizeable industry in itself and is destined to play a greater roll in the production of finer fabrics as scientific methods take hold of the industry.

A Return Visit To The Textile Shops

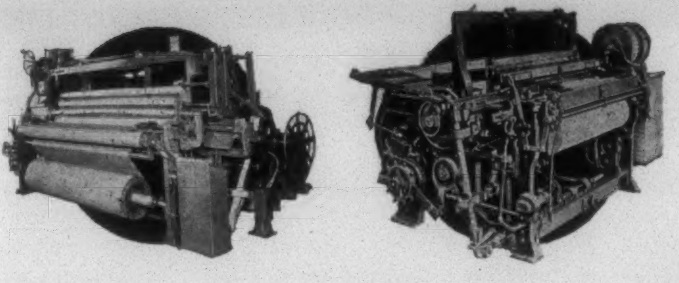
By DAVID CLARK, Editor

EARLY in 1934 I heard that the gypsy coppersmiths, whom I had several times driven out of the textile field in the South, were again active and I wrote another editorial exposing their crooked racket as I had done several times in the past. The gypsies would go to a textile mill and offer to repair slasher cylinders, dry cans and dye vats and get the mill to sign a contract which the mill thought would mean a bill for $25 to $50.

It was a trick contract based upon pounds of copper or solder and when the bill was presented it frequently was for from $300 to $1,500 although a very small amount of work had been done. The mill would protest but the bill was in accordance with the terms of the trick contract and when the gypsy coppersmiths threatened suit, it was usually paid.

In March, 1934, a young man, E. J. Eaddy of Spartanburg, S. C., visited my office and made the statement that I had almost put him out of business. He said that I was entirely right about the gypsy coppersmiths but my exposures had caused every mill in the South to look upon every repairer of slasher cylinders and dry cans as a crook and his Shop was finding it difficult to get business.

He asked me to visit his plant at Spartanburg, S. C., and if I found everything alright to tell the mills that he was not in the gypsy coppersmith class and that he was doing an honest business. His request was reasonable and, as I



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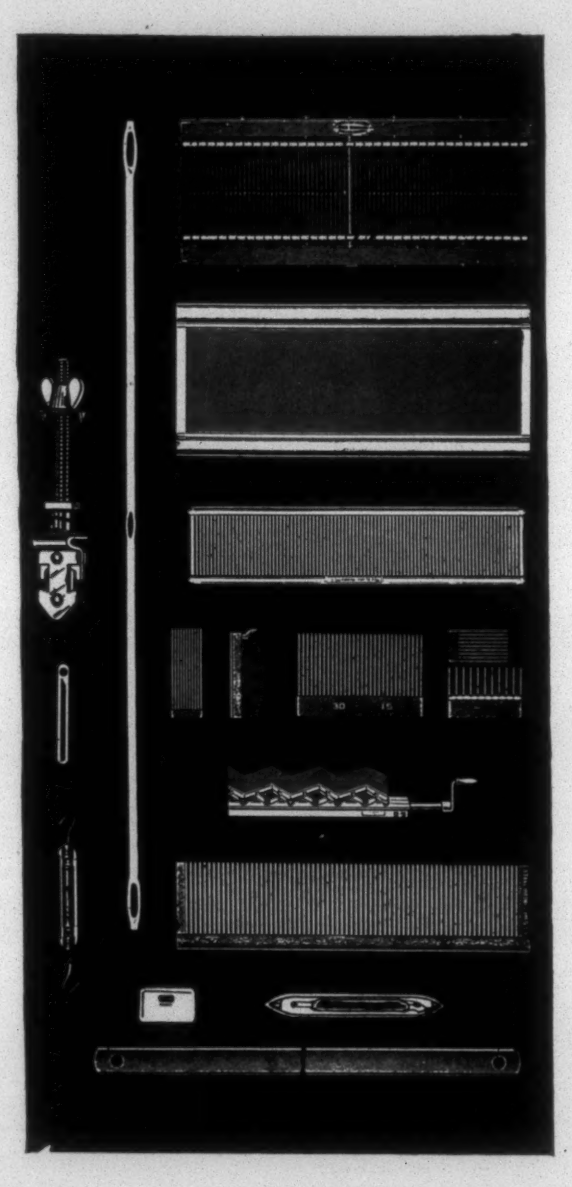

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did not wish to injure any legitimate business, I went to Spartanburg for an inspection and in our issue of April 5, 1934, published a story which he has been kind enough to say "made his business."

E. J. Eaddy was graduated from Wofford College and then took a civil engineering degree from the same institution. After several years with the Fiske-Carter Construction Co. and the South Carolina Highway Commission, he decided to get into business for himself and established The Textile Shops at Spartanburg, S. C., for metal work such as repairing slasher cylinders, slasher hoods and picker and card screens.

Although they had only been in business for two years and occupied a small building near the Fair Grounds, I was surprised at the high quality of the work they were doing and the manner in which they had developed or adopted efficiency methods. They gave me a list of mills, such as the Springs Cotton Mills, Hannah Pickett Mills and Aragon-Baldwin Mills and inquiries sent to these mills brought reports that the repair work done by The Textile Shops had been satisfactory and that their charges had been very reasonable.

The Textile Shops grew and prospered and I paid them another visit in February, 1940. They were located on Union Highway in a building which had 12,000 square feet and had become pioneers in the use of stainless steel for slasher cylinders, dry cans, etc. They had installed a number of special machines for handling stainless steel and were welding seams which were almost impossible to detect after the cylinders were ground and polished. The cylinders were being ground to such a small tolerance that the "out-of-circle" tolerance was less than that of the stainless steel sheets which were received. Upon the floor at that time were ten slasher cylinders which were being repaired for prominent mills. Some were being recovered with copper and others with stainless steel.

Recently when in Spartanburg, I decided to again visit The Textile Shops and when E. J. Eaddy showed me over the plant I realized that it had grown greatly. Not only do they have modernized offices and drafting rooms but the shop building was 120 by 168 feet and fully equipped with lathes and many special machines for sheet metal work. The original shop near the Fair Grounds was 25 by 30 feet. They now employ about 60 people and make about all the slasher cylinders made in this county.

They make cylinders for the Cocker Machine & Foundry Co. of Gastonia, N. C., and build the cylinders which the West Point (Ga.) Foundry & Machine Co. uses for the Saco-Lowell slashers which they now build. We understand that The Textile Shops now build all slasher cylinders which are made and that they do 95 per cent of all the slasher cylinder repair work.

Front row (left to right): R. H. Williams, B. T. Bottle, Jr., Betty Lee Eaddy and T. T. Jenkins. Standing: E. J. Eaddy, C. D. Schrader, Mrs. J. E. Spivey, H. W. Kiser, J. E. Spivey, Miss Reba Smith and J. W. Williams.

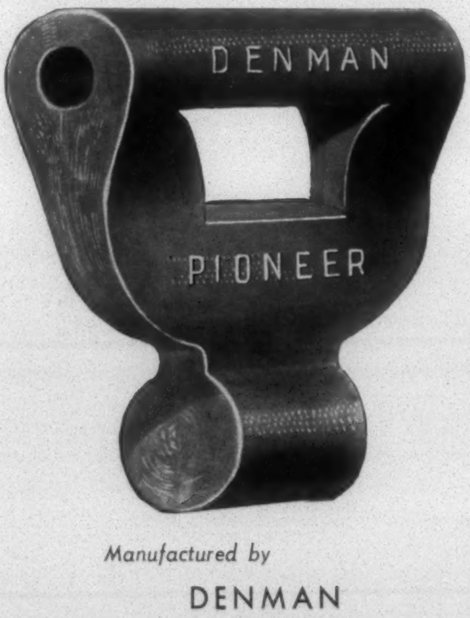
That is a far cry from the little shop I visited in 1934 in order to convince Southern mills that they were not in the same class with the gypsy coppersmith.

While they cover cylinders and dry cans with copper, when it is preferred by mills, they are great believers in stainless steel because of its many advantages. The tensile strength of stainless steel is four times that of copper. Where copper cylinders will develop blisters, stainless steel retains its shape. They cost approximately the same. There are, of course, different types of stainless steel with different percentages of chromium and nickle. Some are best for some purposes while others are more suitable for other machines.

The Textile Shops were building a large number of stainless steel kettles and size boxes. I found that the modern practice is to insulate all slasher cylinders and size kettle with dead space to retard heat radiation. For rayon size boxes, a steam jacket instead of an open coil is the practice. The Textile Shops were building several stainless steel exhaust systems for slasher rooms and finishing plants and the building and repairing of card screens was a large portion of their business. The spinning cylinder department

Operations of The Textile Shops are carried on in this plant at Spartanburg, S. C.

it's all in the "KNOWHOW"



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Denman Pioneer Picker superiority, too, is based on years of cumulative knowledge. Constant progress in research laboratory, improved mechanical design, and inter-related efforts of Terrell field men and Denman engineers—all these have been a consistent policy through all the years Denman and Terrell have pioneered rubberized fabric pickers.

Supported by the fine cooperation of mills, Denman pioneering is continuous. Experiments in the laboratory and on-the-job testing are constantly in process for new developments that will KEEP Denman FIRST with the BEST . . . and continue to give you pickers that result in

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contained a large amount of special machines for the building and testing of cylinders.

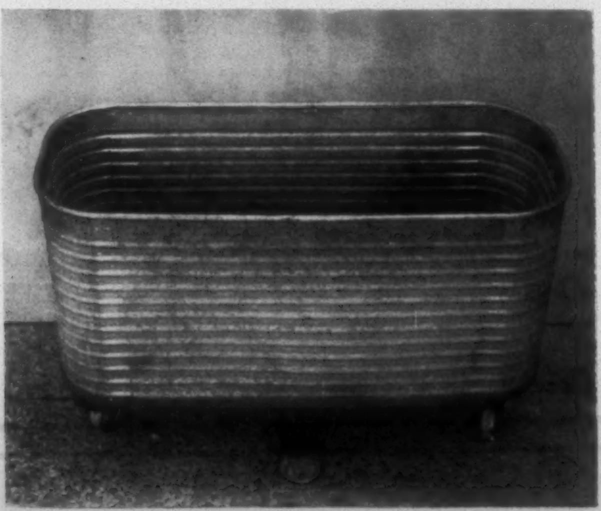
The present shop, while divided into departments, has been efficiently designed. From the sheet stainless steel which is stored in bins according to size and metal content, the work flows in an efficient manner to the completed machine and the shipping room.

Present officers, and office personnel, of The Textile Shops are: E. J. Eaddy, J. W. Williams and J. E. Spivey, general managers; Mrs. Louise E. Spivey, office manager; Reba Smith and Betty Lee Eaddy, typists and clerks; H. W. Kiser, T. T. Jenkins and E. B. Morrison, engineers; B. T. Bottle, Jr., draftsman; R. H. Williams, salesman; and C. D. Schrader, sheet metal sub-contractor.

On its letterhead The Textile Shops advertise as manufacturers and repairers of copper or stainless steel cylinders and dry cans, coppersmithing and sheet metal work, copper or stainless steel slasher rolls, size kettles and tanks, dust collecting systems, vapor exhausting systems, all types ventilating, stampings and screw machine products, card screens, spinning cylinders, quill cams, etc.

This is the plant where Sunray Co., Inc., produces its items.

After I had completed my visit to The Textile Shops, Mr. Eaddy took me a short distance further down the road toward Union, S. C., to Camp Croft, where he had purchased a building and started a new business, the Sunray Co., which is to specialize in working sheet metals. I met the manager, H. O. Coddington, who showed me over the plant. Many special machines for cutting, rolling and forming pieces out of sheet metal have been installed and more are to be added.



A yarn package truck manufactured by Sunray.

At the present time they are making doffer boxes with roll tops and also narrow metal trucks for quills, so narrow that they can pass down alleys behind the looms. The metal trucks and quill boxes being made by the Sunray Co. are very light but almost indestructible. Many other products are to be developed and under the leadership of E. J. Eaddy the business is certain to grow.

Japanese Hope For New Silk Markets

Steps to help Japan regain its silk market in countries other than the United States are being taken by the Supreme Commander, Allied Powers, members of the Export Managers Club of New York were told recently by Walter B. Baruch, vice-president, Schenley International Corp., and newly-elected president of the club. When Japanese goods were offered for sale to build up the country's dollar supply for badly needed imports, declared Mr. Baruch, who recently spent three weeks in Japan, the "big disappointment was the poor American demand for silk yarn and manufactured silk."

"Before the war," he said, "the United States was Japan's best customer for silk, taking 80 to 90 per cent of her exports in this product. But today the market has been virtually lost. Most of the Japanese silk was formerly used here for hosiery. Now nylon seems to have captured this market.

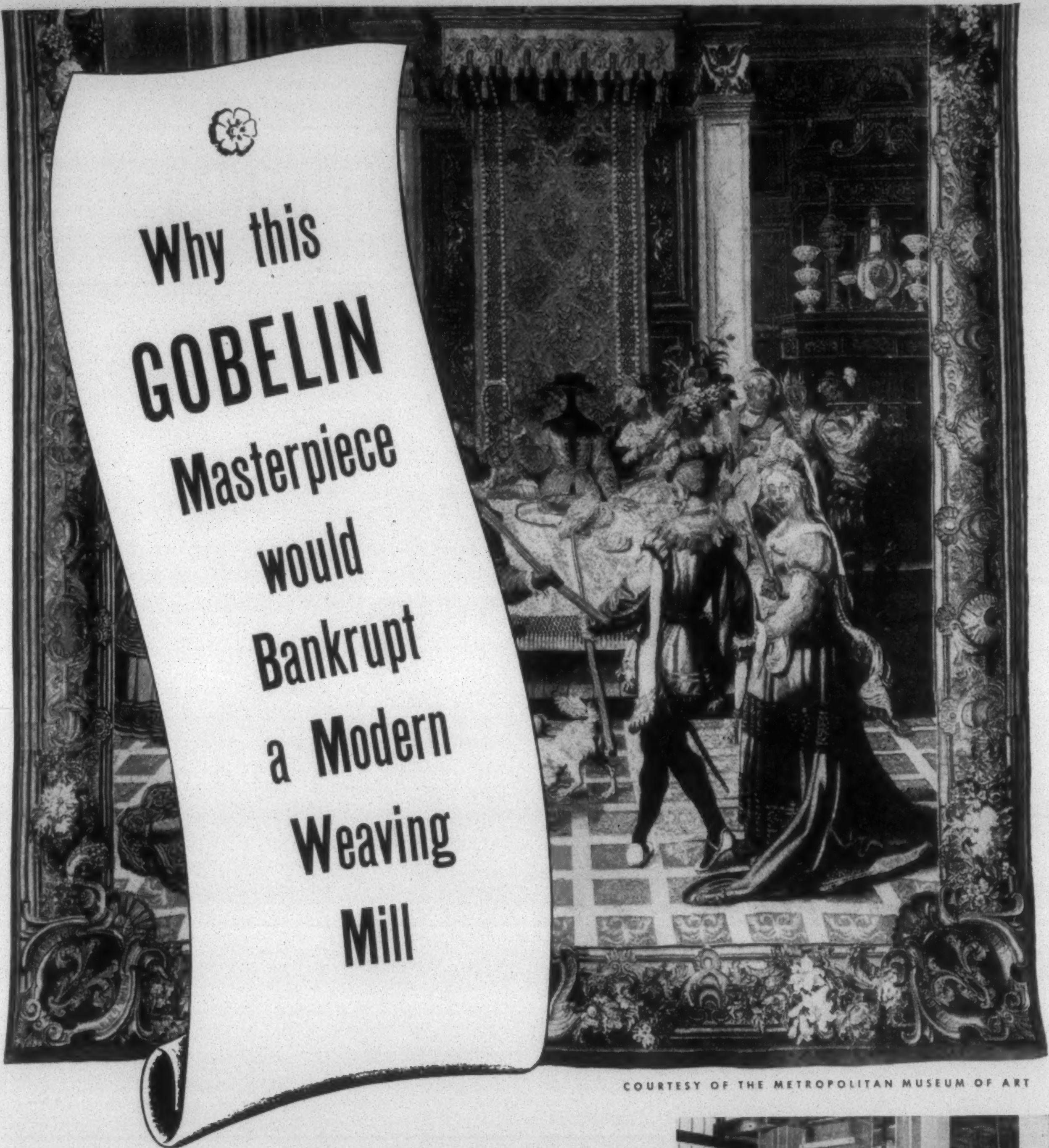
"Potentially, silk represents Japan's best source of dollars. S. C. A. P. is taking steps to regain the silk market and is trying to get other countries than the United States to purchase Japan's silk. Dollars from the sale of exports go into the S. C. A. P. trust fund. Cotton for Japan was obtained by a C. C. C. credit of 200 million dollars. To pay the loan, the manufactured cotton goods were sold only to countries able to pay in dollars. About 75 per cent of the loan has now been paid and sufficient inventory is held to close out the balance. A number of barter transactions have been made between Japan and the countries unable to pay in dollars but no cotton has been sold this way."

Mr. Baruch said America's future export trade with Japan is dependent upon this country's ability to aid the Japanese to rehabilitate themselves—a project which has the enthusiastic support of Gen. Douglas MacArthur. Mr. Baruch visited Japan to make a business survey for Schenley affiliated companies.

Using More Cotton In Producing Fire Hose

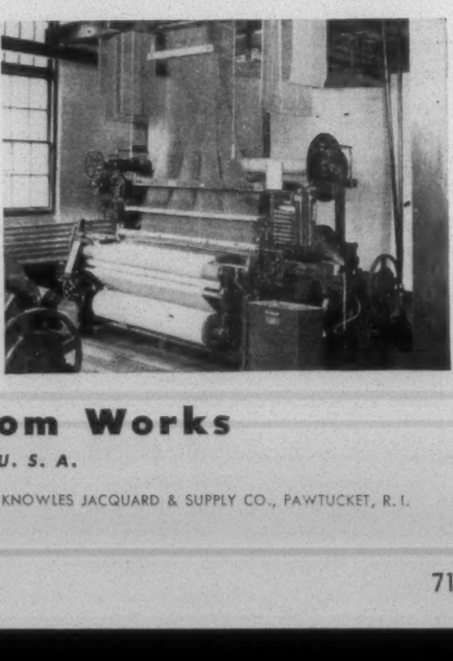
National Cotton Council market researchers revealed recently that cotton consumed in fire hose more than doubled during the eight-year period, 1939-1946. Fire hose manufacturers in 1946 used 33,120 bales of cotton compared with 16,080 bales in 1939. One reason for the rapid increase in cotton usage probably has been the development of new weaving techniques which enable hose manufacturers to make an all-cotton hose which is lighter in weight than earlier fire hoses yet does not leak water. The weaving process causes the cotton fibers to expand so much when wet that water is unable to escape between them.

The British woolen and worsted industry is back on its feet again, reports the New York *Journal of Commerce.* Today, production is not far short of pre-war levels. Moreover, a large portion of this production is going into the weaving of British-famed fine quality worsteds.



Why this GOBELIN Masterpiece would Bankrupt a Modern Weaving Mill

COURTESY OF THE METROPOLITAN MUSEUM OF ART



As late as 1938, the Gobelin Tapestry Works in Paris were government-operated on the same basis on which they were started in 1500. The filling was passed back and forth through the warp *by hand.* More than 400 years without any technical developments to make these masterpieces more widely available! No private enterprise could long survive on that basis.

Today, modern masterpieces in many different types of fabric are made readily available by C&K Looms which weave first-quality yardage at high speeds . . . by C&K Looms which, in the short space of the last 20 years, *have steadily increased output per man-hour up to 45% and over.*

And C&K Looms now being produced are recording new increases in efficiency . . . are helping to keep retail markets humming with all types of soft goods in quantities and at prices which mean steady business and profits to mills, manufacturers and merchants. Whatever type of fancy fabric *you* produce, C&K Looms will weave it faster and better, at lower cost.

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Materials Handling

FREIGHT ELEVATOR APPLICATIONS

By W. W. BRYANT, Sales Engineer, Elevator Division
Westinghouse Electric Corp., Jersey City, N. J.

ELEVATORS furnish transportation to the upper floors of all office buildings, department stores, hospitals, apartment houses, and even our own homes. They handle materials of all kinds in multiple story factory buildings and warehouses. An idea of the extent to which elevators are used in our modern civilization is given by statistics which indicate that there are approximately 200,000 elevators in the United States, of which 82,000 are electric passenger elevators, 80,000 electric freight elevators and the balance are hydraulic elevators.

Freight elevators form a vital part of the material handling system in multi-floor factories, warehouses and stores. Just as the development and application of automatic machinery, improved tools and scientific methods contribute to increased production and efficiency of a manufacturing or commercial operation so the careful analysis of the freight elevator requirements, as a principal element in the material handling system, is important to profitable operations. It is not proposed to present in this discussion all the information and calculations necessary to select the large elevator, but rather to present a few methods which have been found generally satisfactory in the application of standard freight elevators for general use.

General Application Considerations

In order to make an adequate study for determining the freight elevator size, capacity, speed and operation, it is necessary to carefully consider the following: (1) The building characteristics—including *the travel,* that is the distance between the lowest and highest floors served by the elevator; *the number of floors* and *the floor heights;* and the floors on which openings on two sides of the car are required. It is also necessary, of course, to review the structural conditions that may influence the size, shape, or location of the elevator. (2) Then consider the units to be carried on the elevator—the weight, the size, the type of unit, and the method of loading. Will they be bulky relatively light packages? Will they be hand truck loads? Will they be power truck loads? Or will they be on pallets or skids loaded by power trucks that do not ride with the loads? (3) The number of units to be handler per hour. (4) The probable cycle of operation and the principal floors served during the peak of the cycle. (5) Will the elevator handle passengers during periods of peak passenger traffic?

All modern elevators are the traction type. Multiple hoist ropes are used and these pass over a driving sheave on the machine—the traction at this point between ropes and driving sheave hoists the car. For speeds at 200 f.p.m. or less, which are generally satisfactory for standard freight elevators, the machines are the geared type. There are two types of control that may be used—the variable voltage type, and the A-C rheostatic type.

Variable Voltage Equipment

The best freight elevators have the variable voltage type of control. The hoisting motor is direct current and there is a motor generator set provided for each elevator. With this system, the speed and direction of motion of the car is controlled by varying the generator field. All rheostatic losses are eliminated and the regulation particularly at leveling speed can be accurately controlled. This type of elevator permits the most accurate stops, the most rapid acceleration and retardation, and the minimum power consumption and maintenance on active elevator. Automatic leveling to compensate for cable stretch or other variations from floor level is an inherent part of the variable voltage equipment. Having the elevator platform always level at the landing being served is, of course, desirable for any type of load or method of loading but where relatively heavy pallet or skid loads are placed in the elevator car with small wheeled power trucks, a smooth threshold joint is very necessary.

The standard speeds with variable voltage geared freight elevator equipment are 100, 150 and 200 feet per minute; 75 feet per minute is also a popular standard for the 10,000 pound rating. The recommended application of the speeds is as follows: 100 f.p.m. for two or three floors; 150 f.p.m. for four or five floors. If one of the floors exceeds 20 feet in height, the next higher speed is desirable. Higher speeds are available when needed.

Rheostatic Equipment

The A-C rheostatic type of freight elevator equipment is often suitable where the elevator is used infrequently and for that reason it may be considered desirable to limit the investment in the equipment. (By infrequent use we mean an average of less than five trips per hour on a normal business day.)

Where the normal landing accuracy of the A-C rheostatic type of equipment may not be adequate for the loading methods expected, then there is a choice of two features—"inching," which may be added to the controller for a single speed A-C motor at nominal cost, permits moving the car to floor level within a limited zone (approximately nine inches plus or minus) with the doors open—or automatic leveling, with two-speed motor and control apparatus, which is available only with selective collective or single automatic operation at speeds up to 100 f.p.m. at capacity up to 8,000 pounds and at 75 f.p.m. at 10,000 pounds capacity.

The standard speeds for A-C rheostatic type geared freight elevators are 50, 75 and 100 feet per minute. Application of speeds is recommended as follows: 50 f.p.m. for two floors; 75 f.p.m. for three or four floors; and 100 f.p.m. for five to eight floors. If one of the floors extends 20 feet or more in height, the next higher speed is desirable.

Capacity and Loading

Now let us look for a minute at the standard car and door sizes and the capacity ratings that may be provided for each size.

Standard Platform Size Width Depth	Standard Door Size Width Height	Standard Capacity Rating in Pounds
5′4″ x 7′0″	5′0″ x 8′0″	2,500, 3,000
6′4″ x 8′0″	6′0″ x 8′0″	2,500, 3,000, 4,000
8′4″ x 10′0″	8′0″ x 8′0″	4,000, 5,000, 6,000, 8,000
8′4″ x 12′0″	8′0″ x 8′0″	5,000, 6,000, 8,000, 10,000
10′4″ x 14′0″	10′0″ x 8′0″	10,000

The clear inside car width is four inches less than the dimensions in the above table. The clear inside car depth, that is the distance from front to back of the car, is six inches less when there is an opening at only one end and eight inches less when there is an opening at both front and rear of the car.

The size of the freight elevator car to be used is generally dependent on the dimensions of the freight package or on the size and number of skids or pallets of material to be carried per trip. Determination of the capacity rating must include consideration of the intended initial use or probable future use of power trucks of the forked or other type for placing skidded or palletized material on the car. The use of such power trucks for moving material in industrial plants is ever increasing and their use in elevator loading imposes more severe strain on the entire elevator car structure and the guide rails than with the former general practice of loading by hand truck.

Operating Time

The carrying capacity per hour of a freight elevator is determined by the capacity or normal load of the elevator and the time required per round trip. The round trip time is made up of the following three elements: (1) The running time, which may be readily calculated using the speed that is chosen with due allowance for accelerating and retarding time and the distance traveled. (2) The time for operation of the car gate and hoistway doors depending on method of operation which may be manual or power. (3) The loading and unloading time depending on method of loading and unloading. It is recommended that wherever practical a study be made of the loading and unloading operations at a similar elevator in the plant.

Operation

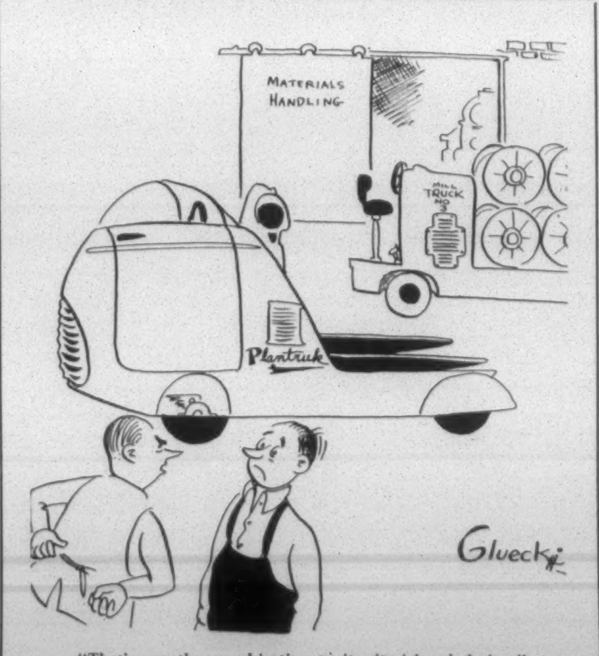
The most useful and flexible type of operation for use with variable voltage and A-C rheostatic freight elevators is the selective collective equipment with an annunciator. The car may be operated without an attendant. When so operated, calls registered by the pressing of car or corridor buttons are collected and the car automatically answers the "down" calls as approached (not in the order registered) when moving down and similarly answers the "up" calls when the car is moving up. Means are provided so that when a loader or other person is in the car, he may by pressing a button in the car by-pass other corridor calls when the car is loaded, the by-pass feature automatically resetting at the next stop. The elevator attendant, when used, has complete control of the car and can run in either direction to answer calls indicated in the annunciator by pressing the corresponding car button. If attendants will never be used, the annunciator feature may be omitted.

A somewhat simpler type of operation is available, the single automatic type. This is also available for both variable voltage and A-C rheostatic freight elevators for operation without attendant. It is less expensive but has the disadvantage that corridor calls cannot be registered when the car is in motion, nor can the car respond to more than one call at a time. A corridor call that is registered when the car is stopped can be cancelled by a person on the car. Single automatic equipment will not collect a series of calls as the selective collective equipment will do if the by-pass is not used.

If an experienced attendant will always operate the elevator the car switch releveling type of operation is a simple inexpensive means of operating a freight elevator having variable voltage control. The car will travel in either direction and will stop in response to the movement of the car switch, leveling automatically at each floor where a stop is to be made. A double row target type annunciator to register corridor calls is usually an adequate signal system.

There is also car switch type of operation for freight elevators with A-C rheostatic control. Leveling the car at each landing is done by the attendant to a mark on the door with the normal car switch operating device. A single row target type annunciator is the usual signal system.

The least expensive type of operation is the continuous pressure type. It is available for light service A-C rheostatic elevators. Buttons are installed in the corridor and car, the operation of which will cause the car to move in a selected direction as long as the button is held in. The car will stop



"That's exactly my objection to it—its 'zippy' design."

when the button is released. This control is not recommended for over 70 feet of travel.

Hoistway Doors and Car Gates

The standard hoistway door is the vertical bi-parting metal clad wood door with heavy angle on the top of the lower half of the door to support truck wheels. The doors of all active elevators should be power operated. All doors wider than eight feet should be power operated except for some very inactive elevators. The power operated doors materially improve the efficiency of attendants by reducing fatigue.

Each entrance of a freight elevator car should be protected with a vertical counterbalanced gate which may be wire mesh, expanded metal, or wood. Gate operation may be manual or power operated to correspond with the hoistway door operation.

Passenger Loadings

While the definition of a freight elevator is one which carries only freight and the employees necessary to load or unload the car, most states will grant permission on application for carrying other employees on freight elevators if certain safeguards are provided. The most important safeguards are; first, a capacity rating the same as required for a passenger elevator with same net area; second, interlocks on hoistway doors instead of locks and contacts; and third, interlocking of the car gate and the counterbalanced hoistway door, so that the hoistway door opens first and the car gate closes first to eliminate the tripping hazard. This third requirement is preferably met by use of power operated doors and gates with sequence operation. The door time with sequence operation is the same as for manual doors.

The minimum passenger ratings for the standard freight cars based on net area are shown in the following table:

Car Size	Net Area Sq. Ft.	Passenger Rating	Recommended Rating
5′4″ x 7′0″	32.5	2,900	3,000
6′4″ x 8′0″	45	4,350	5,000
8′4″ x 10′0″	76	8,400	8,000
8′4″ x 12′0″	92	10,500	10,000
10′4″ x 14′0″	135	16,600	16,000

The passenger rating is based on the A. S. E. Code and the recommended rating is the next larger even rating or the next smaller where the passenger rating does not exceed an even rating by more than five per cent. Since it is impractical to limit the number of passengers who will crowd on to the elevator, it is undesirable for the elevator to have a lower rating than shown in above table even where the state code permits a lower passenger capacity.

Where a plant is more than three floors high serious consideration should be given to obtaining approval of using the freight elevator for handling employees during the rush periods. Passenger elevators should be provided for the passenger traffic during the working hours so that passenger traffic will not interfere with freight handling.

Abstract of an address at the Conference on Materials Handling held concurrently with the National Materials Handling Exposition at Cleveland, Ohio, in January.

Maintenance & Engineering

The Electrical Code And Textile Mill Wiring

Part Nine of a Series by JAMES T. MEADOR

SINCE going to press with Part Eight of this series, in the May issue of TEXTILE BULLETIN, we have had several requests from mill men concerning the proper size of flexible cord for certain loads or requirements. Therefore, the following tabulation is submitted for your benefit, with the request that you let us know about any of the other needs you might have arise around you. This table is given with allowable current-carrying capacity for each of the various types under the different standard wire sizes (AWG).

	Wire Sizes (AWG)								
Flexible Cord Types	18	16	14	12	10	8	6	4	2
Rubber Types PO, C, PD, P, PWP, K, E, EO	5	7	15	20	25	35	45	60	80
Rubber Type Armored Type CA	5	7	15	20	25	35	45	60	80
Rubber Types S, SO, SJ, SJO, SV, POSJ	7	10	15	20	25	—	—	—	—
Thermoplastic Types ST, SJT, SVT, POT	7	10	15	20	25	—	—	—	—
Types AFS, AFSJ, HC, HPD, PSJ	10	15	20	—	—	—	—	—	—
Types AVPO, AVPD	17	22	28	36	47	—	—	—	—
Cotton Types CFC, CFPO, CFPD	6	8	17	—	—	—	—	—	—
Asbestos Types AFC, AFPO, AFPD	6	8	17	—	—	—	—	—	—

Now, in this issue we will complete Article 410, covering fixtures, lampholders, etc., which was started in the May issue. This part of the National Electrical Code, while not of particular interest to many mill men, has been of some benefit to others (mill village maintenance crews, for instance) and, as it is a part of the code as a whole, we are bound by the permission granted by the National Fire Prevention Association to use it as a whole. However, I can promise you that many things more interesting are coming up soon. Meanwhile, we continue as follows with *Special Provisions for Electric Discharge Lighting Systems of more than 1,000 Volts* (this is principally what is commonly termed as "neon" or "cold cathcode").

Section 4191, General: Equipment for use with electric discharge lighting systems and designed for an open-circuit voltage of more than 1,000 volts shall be of a type approved for such service. In addition to complying with the general requirements for lighting fixtures, such equipment shall conform to Section 4191 to Section 4203 inclusive. The terminal of an electric discharge lamp shall be considered as alive when any lamp terminal is connected to a potential of more than 300 volts. For signs and outline lighting, see Article 600.

Section 4192, Control: Fixtures or lamp installations shall be controlled either singly or in groups by an externally-operable switch or circuit-breaker which will open all ungrounded primary conductors. The switch or circuit-breaker shall be located within sight of the fixtures or lamps, or it may be located elsewhere if it is provided with means for locking in the open position.

Section 4193, Switches: Snap switches shall conform to Section 3814.

Section 4194, Transformer Ratings: Transformers and ballasts shall have a secondary open-circuit voltage of not more than 15,000 volts with an allowance on test of 1,000 volts additional. The secondary current rating shall not be more than 240 milli-amperes. When the open circuit voltage is more than 7,500 volts, the secondary current rating shall not be more than 120 milli-amperes.

Section 4195, Transformer Type: Transformers shall be of an approved enclosed type. Transformers of other than the askarel insulated or dry type shall not be used.

Section 4196, Transformer Secondary Connections: The high-voltage windings of transformers shall not be connected in series or in parallel, except that for two transformers, each having one end of its high-voltage winding grounded and connected to the enclosure, the high-voltage windings may be connected in series to form the equivalent of a mid-point grounded transformer. The grounded ends shall be connected by an insulated conductor not smaller than No. 14.

Section 4197, Location of Transformers: Transformers shall be accessible after installation. The transformers should be installed as near to the lamps as practicable to keep the secondary conductors as short as possible. Transformers shall be so located that adjacent combustible materials will not be subjected to temperatures in excess of 90° C.

Section 4198, Wiring Method, Secondary Conductors: Approved gas-tube sign cable suitable for the voltage of the circuit shall be used. For installation of conductors See Section 6031.

Section 4199, Transformer Loading: The lamps connected to any transformer shall be of such length and characteristics as not to cause a condition of continuous overvoltage on the transformer.

Section 4200, Lamp Supports: Lamps shall be adequately supported as required in Section 6033.

Section 4201, Mechanical Injury: Lamps shall not be located where normally exposed to mechanical injury.

Section 4202, Lamp Terminals and Lampholders: Parts which must be removed for lamp replacement shall be hinged or fastened by an approved means. Lamps or lampholders or both shall be so designed that there shall be no exposed live parts when lamps are being inserted or are being removed; this requirement shall be in force one year from the effective date of this code, previous to that time, Section 6011 of this code shall be applied.

Section 4203, Marking: Each fixture or each secondary circuit of tubing having an open-circuit voltage of more than 1,000 volts shall have a clearly legible marking in letters not less than one-quarter of an inch high reading "Caution........volts." This voltage indicated shall be the rated open-circuit voltage.

Grounding

Section 4211, General: Fixtures and lighting equipment shall be grounded as provided in Sections 4212 to 4216 inclusive.

Section 4212, Metallic Wiring Systems: Metal fixtures installed on outlets wired with grounded metal raceway or grounded armored cable shall be grounded.

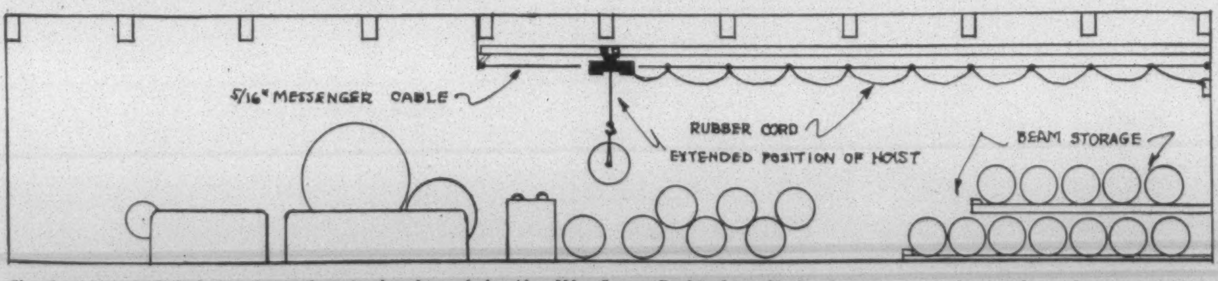
Section 4213, Non-Metallic Wiring Systems: Metal fixtures installed on outlets wired with knob-and-tube work, or non-metallic sheathed cable, on circuits operating at 150 volts or less to ground, shall be grounded except as follows:

(1) Fixtures mounted on metal or metal lath ceilings or walls may be insulated from their supports and from the metal lath by the use of insulating joints or fixture supports and canopy insulators. See Section 4215.

(2) Fixtures not mounted on metal or metal-lath ceilings or walls need not be insulated or grounded. See Section 4215.

Fixtures made of insulating materials, and lampholders with shells of insulating material, are recommended for use with wiring systems that do not afford a ready means for grounding the exposed non-current-carrying parts of fixtures and lampholders.

Section 4214, Equipment of More Than 150 Volts to Ground: Metal fixtures, transformers and transformer enclosures on circuits operating at more than 150 volts to ground shall be grounded. Other exposed metal parts shall be grounded unless they are insulated from ground and other conducting surfaces and are inaccessible to unqualified persons, except that lamp tie wires, mounting screws, clips



Sketch of a typical slasher room, such as in the plant of the Alco Mfg. Co. at Rockingham, N. C., showing a very frequently used arrangement of Rubber Type "S" electric cord, usually size No. 14, A. W. G., two or three conductors, depending upon whether the hoist is single or three-phase, etc. Grounding is usually considered as being approved if the steel rail is effectively grounded to a water pipe, or to the system ground circuit of the electric system. As the hoist moves forward or backward, an arm (of lightweight angle iron) which reaches from the hoist trolly out to the messenger cable and which carries the rubber electric cord, either pulls out the cord (which in turn is supported on the messenger cable by brass or steel rings threaded over the messenger cable) or pushes it back into a series of closed loops, as shown in the right-hand position above. This eliminates the trouble of always having a long cable hanging down in the way.

and decorative bands on glass lamps space not less than 1½ inches from lamp terminals need not be grounded.

Section 4215, Fixtures, Lampholders and Receptacle Plates Near Grounded Surfaces: Ungrounded metal lighting fixtures, lampholders and face plates shall not be installed within eight feet vertically or five feet horizontally of laundry tubs, bath tubs, shower baths, plumbing fixtures, steam pipes or other grounded metal work or grounded surfaces. Metal pull chains used at these locations shall be provided with insulating links.

Section 4216, Methods of Grounding: Equipment shall be considered as grounded when mechanically connected in a permanent and effective manner to metal raceway, the armor of armored cable, the grounding conductor in nonmetallic sheathed cable, a separate grounding conductor not smaller than No. 14, or to gas piping, providing that the raceway, armor, grounding conductor, or gas pipe is grounded in a manner specified in Article 250.

Appliances

Section 4221, Scope: This article shall apply to electric appliances used in any occupancy.

Section 4222, Branch Circuit Requirements: Every appliance shall be supplied by a branch circuit of one of the types specified in Article 210. Motor-operated appliances shall also conform to the requirements of Article 430. (See Table 29 of Chapter 10 for the conductors of a household range branch circuit.)

Section 4231, Insulation of Cords: Flexible cords used to connect heating appliances shall comply with the following:

(a) *Appliances Requiring Heater Cords*—Flexible cords used to connect smoothing irons, or to connect portable electrically-heated appliances rated at more than 50 watts and which produce temperatures in excess of 121 C. (250° F.) on surfaces with which the cord is liable to be in contact, shall be one of the types of approved heater cords listed in Table 31, Chapter 10.

(b) *Other Heating Appliances*—All other portable electrically-heated appliances shall be connected by one of the approved types of cord listed in Table 31, Chapter 10, selected in accordance with the usage specified in that table.

Section 4232, Insulation of Appliances: Portable appliances shall be provided with an adequate dielectric interposed between current-carrying parts and those external surfaces which persons can touch, except for toasters, grills or other heating appliances in which the current-carrying parts at high temperature are necessarily exposed. In locations where the dielectric is exposed to mechanical injury, it shall be suitably protected.

Section 4233, Portable Immerson Heaters: Electric heaters of the portable immersion type shall be so constructed and installed that current-carrying parts are effectively insulated from electrical contact with the substance in which immersed. The authority enforcing this code may make exception of special applications of apparatus where suitable precautionary measures are followed.

Section 4234, Protection of Combustible Material: Each electrically-heated appliance that is obviously intended by size, weight and service to be located in a fixed position shall be so placed as to provide ample protection between the appliance and adjacent combustible material.

Section 4235, Stands for Portable Appliances: Each smoothing iron and other portable electrically-heated appliance which is intended to be applied to combustible material shall be equipped with an approved stand, which may be a separate piece of equipment or may be a part of the appliance.

Section 4236, Signals for Heated Appliances: In other than residence occupancies, each electrically-heated appliance, or group of electrically-heated appliances, intended to be applied to combustible material, shall be installed in connection with a signal unless the appliance is provided with an integral temperature-limiting device.

Section 4237, Infra-Red Lamp Industrial Heating Appliances: Infra-red heating lamps rated at 300 watts or less may be used with lampholders of the medium-base unswitched porcelain type, or other types approved for the purpose. Screw-shell lampholders shall not be used with infra-red lamps over 300 watts rating unless the lampholders are especially approved for the purpose. These lampholders may be connected to any of the branch circuits of Article 210 and, in industrial occupancies, may be operated in series on circuits of more than 150 volts to ground provided the voltage rating of the lampholders is not less than the circuit voltage. Each section, panel or strip carrying a number of infra-red lampholders (including the internal wiring of such section, panel or strip) is considered an appliance. The terminal connection block of each such assembly is deemed an individual outlet.

Section 4238, Grounding: Metal frames of portable and stationary electrically-heated appliances, operating on circuits above 150 volts to ground, shall be grounded in the manner specified in Article 250; provided, however, that where this is impracticable, grounding may be omitted by special permission, in which case the frames shall be permanently and effectively insulated from the ground. It is recommended that the frames be grounded in all cases. For methods of grounding frames of electric ranges, see Sections 2557 and 2560.

Section 4241, Disconnecting Means: Each appliance shall be provided with a means for disconnection from all ungrounded conductors as follows:

(a) *Portable Appliances*—For portable appliances (including household ranges) a separable connector or an

"How do you want 'em, over light or sunny side up?"

attachment plug and receptacle may serve as the disconnecting means. The rating of a receptacle or of a separable connector shall not be less than the rating of any appliance connected thereto, except that demand factors authorized elsewhere in this code may be applied. Attachment plug caps and connectors shall conform to the following: (1) *Live Parts*—They shall be so constructed and installed as to guard against inadvertent contact with live parts; (2) *Interrupting Capacity*—They shall be capable of interrupting their rated current without hazard to the operator; (3) *Interchangeability*—They shall be so designed that they will not fit into receptacles of lesser rating. For household electric ranges, a plug and receptacle connection at the rear base of a range, if it is accessible from the front by removal of a drawer, is considered as meeting the intent of this rule.

(b) *Stationary Appliances*—For stationary appliances rated at not over 300-volt amperes or one-eighth horsepower, the branch-circuit overcurrent device may serve as the disconnecting means. For stationary appliances of greater rating, the branch-circuit switch or circuit-breaker may, if readily accessible to the user of the appliance, serve as the disconnecting means.

(c) *Unit Switches*—Switches which are a part of an appliance shall not be considered as taking the place of the single disconnecting means required by this section unless there are other means for disconnection as follows: (1) *Multi-Family Dwellings*—In multi-family (more than two) dwellings, the disconnecting means shall be within the apartment, or on the same floor as the apartment in which the appliance is installed, and may control lamps and other appliances; (2) *Two-Family Dwellings*—In two-family dwellings, the disconnecting means may be outside of the apartment in which the appliance is installed. This will permit an individual switch for the apartment to be used; (3) *Single-Family Dwellings*—In single-family dwellings, the service disconnecting means may be used; (4) *Other Occupancies*—In other occupancies, the branch-circuit switch or circuit-breaker, if readily accessible to the user of the appliance, may be used for this purpose.

(d) *Switch or Circuit-Breaker to be Indicating*—Switches or circuit-breakers used as disconnecting means shall be of the indicating type.

(e) *Motor-Driven Appliances*—A switch or circuit-breaker which serves as the disconnecting means for a stationary motor-driven appliance of more than one-eighth horsepower shall be located within sight of the motor controller or shall be capable of being locked in the open position.

Section 4242, Overcurrent Protection: Appliances, other than such motor-operated appliances as are required by Article 430 to have additional overcurrent protection, shall be considered as protected against overcurrent when supplied by one of the circuits of Article 210 and in accordance with the requirements therein specified. A range, hot plate, or similar appliance with surface heating elements, and having a rating of more than 70 amperes, shall have two or more subdivided circuits, each provided with overcurrent protection not exceeding 50 amperes. Infra-red lamp heating appliances shall have overcurrent protection not exceeding 50 amperes.

Section 4243, Automatic Flatirons: It is recommended that electrically-heated smoothing irons be equipped with an approved temperature-limiting device.

Section 4261, Nameplate: Each electric appliance shall be provided with a nameplate, giving the maker's name and the normal rating in volts and amperes, or in volts and watts.

Section 4262, Marking of Heating Elements: Individual heating elements which are a part of an electric appliance containing more than one heating element shall each be legibly marked with normal rating in volts and amperes, or in volts and watts.

In closing this installment I would like to call your attention to Article 4237, which might be of interest to you who might like to experiment some with such up-to-date ideas as infra-red drying or heating. The provisions of this section make this experimentation open to you all, with all the possible benefits to your production that would justify some time spent thereon.

Six-Fold Heating And Ventilating System

A SINGLE gas burning, direct-fired space heater, used with a unique system of ductwork, provides six different kinds of heating and ventilating conditions at the Devoncraft Corp., New York City carpet finishing plant. The versatile system was designed by M. H. Shorago, vice-president and general manager of Devoncraft, which is the finishing plant for Duraloom Carpet Mills, Inc.

The system, Mr. Shorago explains, is used for the following: (1) space heating the entire plant, which contains approximately 12,000 square feet of floor space; (2) ventilating the factory during the Summer, using 100 per cent make-up air; (3) heating 100 per cent make-up air during the Winter for drying neoprene base compound that is applied to the back of loop weave broadloom decorator type carpet; (4) bring in fresh, warm air during the Summer for drying the backing compound (for this operation, only the fans in the heater are used); (5) curing the neoprene compound by increasing temperature in the drying and curing room to 200° F.; (6) purging the drying and curing room of heat and fumes after the curing process.

Mr. Shorago reports that operation of the system has proved to be highly successful for drying and curing the carpet backing compound which is a patented development of the company. Because a temperature of 200° can be built up in the drying and curing room, processing time is only two hours. In addition, the system supplants five suspended unit heaters and ten radiators that were used previously for space heating the factory.

The vital part of this unusual heating-ventilating arrangement is a gas-fired Dravo Counterflo heater. It has a capacity of 500,000 B. t. u. per hour and can handle approximately 5,500 cubic feet of heated or unheated air per minute, discharing it at a velocity of 2,000 feet per minute.

The drying and curing room is 50 feet long, 24 feet wide and 14 feet high. The ceiling of the room has been built up to form a double dead air space under the cement roof. This was accomplished by installing aluminum insulation along the bottom of the concrete joists, attaching two-inch by four-inch nailing strips and then three-eighths-inch asbestos board. All cracks were sealed and the ceiling was painted with aluminum paint. Cinder block walls on three sides of the ceiling were sealed with sodium silicate and given a prime coat of paint and a finish coat of aluminum. A partition wall dividing the drying room from an adjoining 28-foot long storage room, where the heater is located, also is doubly insulated and painted aluminum.

A sheet of metal duct 34 feet long extends along one side of the room at ceiling height. It is connected to a small plenum chamber built around the three discharge nozzles on top of the Dravo heater. The duct is graduated in size, from 41 inches by 12 inches nearest the plenum chamber to ten inches by 12 inches at the end to achieve uniform velocity of discharge horizontally across the room. There are 16 discharge ports, each eight inches long and spaced on two-foot centers, in the duct.

At floor level, directly below the supply duct, there is another duct 20 inches by 12 inches running the full length of the room. This duct has five inlet grills, each ten inches high. Two are 16 inches wide, one 14 inches, one 12 inches and one ten inches. The duct is arranged to carry air from the room back to the heater or, when necessary, to exhaust it to the outside through the roof. A 5,600 cfm. fan is located in the room exhaust stack. A 16-inch by 18-inch fresh air duct carries make-up air into a plenum chamber built at the base of the heater. The return air duct from the drying room empties into the same chamber. One end of the chamber is fitted with a removable plate to provide inlet for air recirculated from the factory during comfort-heating periods.

After the Duraloom carpet has been woven, rolls of it are taken into the drying room where the special neoprene backing compound is applied. The carpet then is draped on hangers suspended from the ceiling by a pulley arrangement for drying and curing. About 160 lineal feet of carpet can be processed in one operation. Drying removes moisture from the compound as well as the carpet.

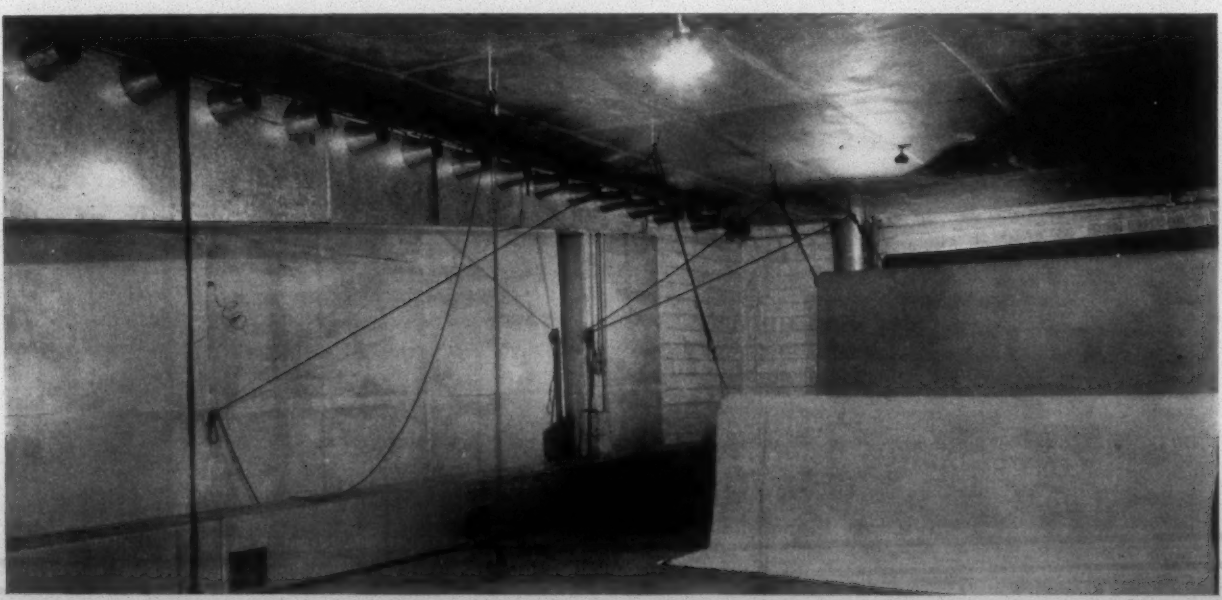
For the drying operation, 100 per cent make-up air is used. The return air damper in the floor level duct is closed and the damper at the other end of the duct is opened to exhaust all moisture-laden air. Because the Dravo heater has a stainless steel combustion chamber that permits rapid transfer of heat from flame to air, temperature of the fresh air drawn into the heater is increased about 70° within a matter of seconds.

If the outdoor temperature is sub-zero, however, dampers on the return air duct are adjusted to bleed in a small amount of air from the room. When the desired temperature is reached, all of the moisture-laden air is exhausted. During the Summer, when outside air is hot and dry, only the fans in the heater are operated for the drying process.

For the curing operation, the heater burner is ignited. In curing the neoprene base backing compound, high temperatures are built up gradually within the drying room. All fresh air supply is blocked off by closing the damper in the make-up air duct. The exhaust air damper also is closed. The heater then is operated on 100 per cent recirculated air. This increases temperature in the drying room to 200° F. The heater is designed to raise temperature of the intake air approximately 70°. Therefore, each time air is recirculated over the combustion chamber of the heater, it picks up additional heat. The cycle continues until desired temperature of 200° is reached. After curing, the room is purged by operating the heater for a short time on 100 per cent make-up air and 100 per cent exhaust.

For comfort space heating, the Dravo unit is operated on 100 per cent recirculated air. Heated air flows through ducts into the other rooms. The panel on the make-up air plenum chamber in the heater room is removed to aid recirculation. The velocity of return air flow is not high but sufficient quantities of air near floor level are drawn back to the heater to achieve effective space heating.

This unusual system, according to Mr. Shorago, not only



View of the Devoncraft Corp. drying and curing room. Walls and ceiling are heavily insulated and painted aluminum. For curing neoprene base compound applied to the back of carpet, temperature of 200° F. is built up in the room by 100 per cent recirculation of warm air through the Dravo Counterflo direct-fired heater located in an adjoining room. Air is discharged through ports in overhead duct and returned to heater through floor level duct. The latter also is used for exhausting air from the room to the outside. The heating arrangement at this plant has six functions.

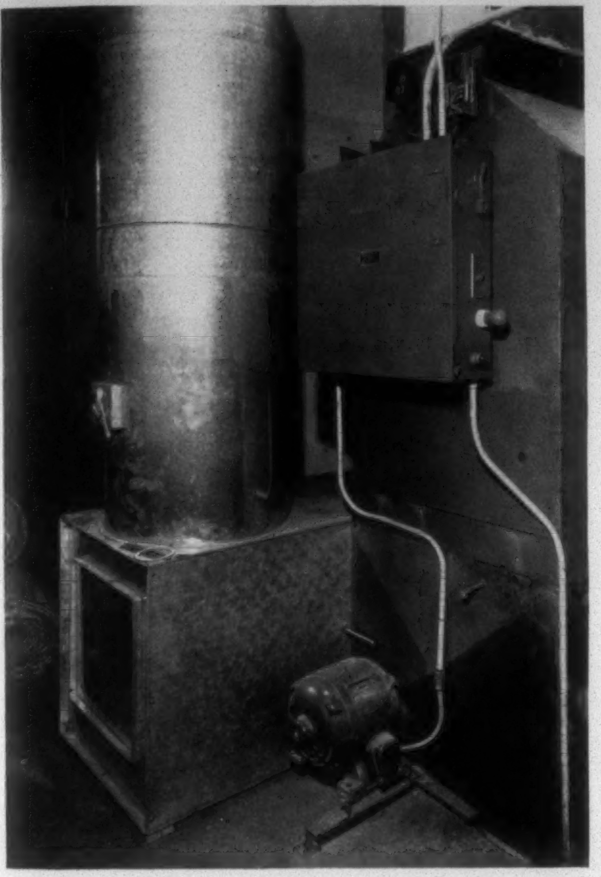


Plate on end of plenum chamber at base of heater is removed for space heating the entire factory to achieve better recirculation. Warm air flows through ducts into other areas of the factory and is drawn back to the heater through the opening in the plenum chamber.

has solved the process heating problems, but has established a high degree of comfort in the plant's working area. Moreover, fuel consumption is more economical than the previous system which was used for space heating only. Hot water for the old radiators and the overhead unit heaters had been supplied from an oil-fired boiler. Now, the entire heating plant is consolidated in the single Dravo unit.

Control of the Dravo heater is automatic by means of room air thermostats. The duct dampers are operated manually since the length of the process heating periods have to be determined by experienced personnel. Mr. Shorago, however, is working on a method to operate the dampers during the drying process by means of humidistats.

Industry Promised Plenty Of Lubricants

Plenty of lubricants during the next four years were promised to American industries recently by an economist for one of the nation's largest oil companies. A. J. McIntosh of the Socony-Vacuum Oil Co., Inc., New York City, asserted that manufacturing facilities for lubricants undoubtedly will be considerably in excess of demand by 1951.

Speaking in Tulsa, Okla., at a meeting of the lubricating section of the American Petroleum Institute, Mr. McIntosh said the United States already has sufficient lubricant production capacity, if used to the fullest extent, to meet foreseeable demands through 1951. In spite of that, though, based on a "carefully-detailed, plant-by-plant study," additional facilities planned or now under construction will increase lubricant production capacity by 16,000 barrels daily or an excess of ten per cent over currently existing facilities.

Mr. McIntosh divided lubricants into two general classifications, automotive and industrial, and predicted that peak consumption within the United States in both classifications will be reached this year.

Mr. McIntosh's forecast for slightly lower consumption of industrial lubricants was based on probable business activity in the next four years. He said "we look for a modest decline over the next few years, culminating in a sharper decline to the 1941 level by 1951" and "for every ten-point difference in the forecast of industrial production, as published by the Federal Reserve Bank, we add or deduct 2,000 barrels per day for the consumption of industrial lubricants."

Adding the results together of surveys of the probable automotive and industrial lubricant requirements, Mr. McIntosh said "we find the total consumption within the United States in 1948 may be a peak and may not be exceeded during the next few years." Exports may increase moderately over the same period.

The Socony-Vacuum economist qualified his prediction of plenty of lubricants for the next four years with a statement that the forecasts "are based upon a continuation of general peace conditions such as we now have." He added that the forecasts omit possible increases in military needs but said "we doubt that any changes in these would materially alter our general conclusions."

Lighting Specifications Book Is Reprinted

The recently published RLM specification guide for buyers, specifiers and sellers of industrial lighting equipment, has just been reprinted, according to announcement by R. W. Staud, president of the RLM Standards Institute, 326 West Madison Street, Chicago 6, Ill. Entitled the *RLM Standard Specifications for Industrial Lighting Units,* this 36-page book contains detailed specifications for 14 of the most commonly employed incandescent and fluorescent lighting units. Specifications cover materials shielding and brightness, efficiency, acceptance criterion, auxiliary control equipment, ballast temperatures, construction, reflection factor, photometric performance, National Code requirements and many others. It is available without charge to all persons interested in the proper planning of lighting for industrial concerns.

"In addition to detailed specifications, invaluable to those desiring lighting equipment performance which meets RLM standards," points out Mr. Staud, "the manual also contains complete data on the objectives, purpose, scope and procedure for developing RLM specifications and insuring conformance. This activity of the RLM Standards Institute in making copies of the RLM specifications freely available," states Mr. Staud, "is in line with one of the institute's basic objectives, which is: 'To promote and encourage high standards of quality in the design, construction, composition, finish, performance and service of lighting equipment, lighting fixtures and pertinent accessories thereto.' "

Free copies of the *RLM Standard Specifications for Industrial Lighting Units* may be obtained by writing to the RLM Standards Institute, 326 West Madison Street, Chicago 6, Ill.

Bleaching, Dyeing & Finishing

MILDEW AND MOLDS

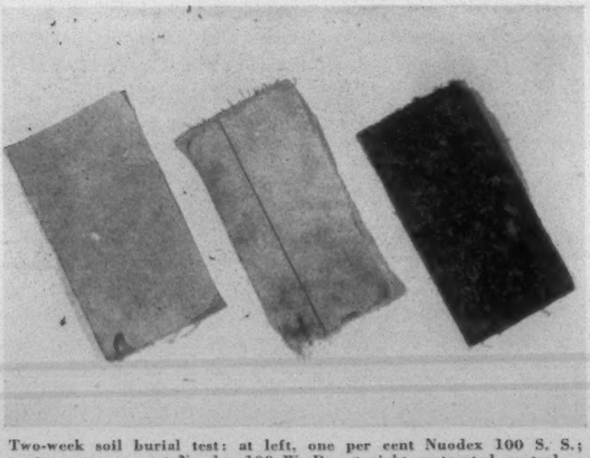
By FRANCIS TRIPP, B. Sc., M. S., Ch. E., Head of Chemistry Department, New Bedford (Mass.) Textile Institute

DURING the Summer months, everyone is conscious of the unpleasant conditions caused by mildew. In our homes we have had occasion to observe mildew or the growth of molds on wearing apparel, food, furniture and other household accessories which have been unprotected and subjected to the proper conditions of humidity and temperature. Undoubtedly, most persons have witnessed the growth of molds on breads, mildew on shower bath curtains with the resultant spots, the heavy growth of mold on shoes and leather, and the musty mildew odors that are characteristic of homes and buildings that have been closed for considerable periods of time.

Since their principal habitat is the soil, they are found wherever dirt or dust exists. Mold spores carried by the air currents often are considered to be the reason for specific allergic responses in humans. Some molds are pathogenic for man, others for plants and animals. Certain species of molds are valuable in industrial processes. Molds are active enzyme producers making them valuable as the producers of certain enzymes and chemical compounds used as foods and drugs. Penicillium Notatum is the species from which penicillin is obtained.

It is highly probable that the great majority of our textile manufacturers, finishers and merchants have at one time or another suffered financially due to damage caused by mildew. However, during the past decade and primarily because of impetus provided by tropical warfare, rapid strides have been made in the elimination of a large portion of the annual damage caused by molds.

Molds belong to the plant kingdom known as fungi. The fungi form a large and diversified group that is characterized by its lack of green coloring matter (chlorophyl) and the tendency of the cells to be arranged in microscopic filaments. They are unable to synthesize their own foods as green plants do and obtain their nourishment by decomposing organic materials. They also require oxygen, water and certain minerals. The higher fungi often grow to considerable size such as mushrooms. Molds may be considered to stand between the higher fungi and the yeasts. They consist of a mass of microscopic threads analogous to the roots of a tree which are known as mycelium. Single threads are referred to as hypha.



Two-week soil burial test: at left, one per cent Nuodex 100 S. S.; center, one per cent Nuodex 100 W. D.; at right, untreated control.

These threads are so small that it is often very difficult to distinguish them without the aid of a powerful lens. The threads penetrate into the depths of the material (food) on which the fungus is growing, and also extend along the surface of the material on which the mold is growing as well as into the air. In the simplest forms of fungi, spores are borne at the ends of the mycelium (filaments) that are extended into the air and appear in color as yellow, green, brown, red, blue or black. Fungi are classified into several large groups according to the manner in which they produce spores. The tiny spores appear to be nothing more than dust and are so light that they may be easily blown about by the wind.

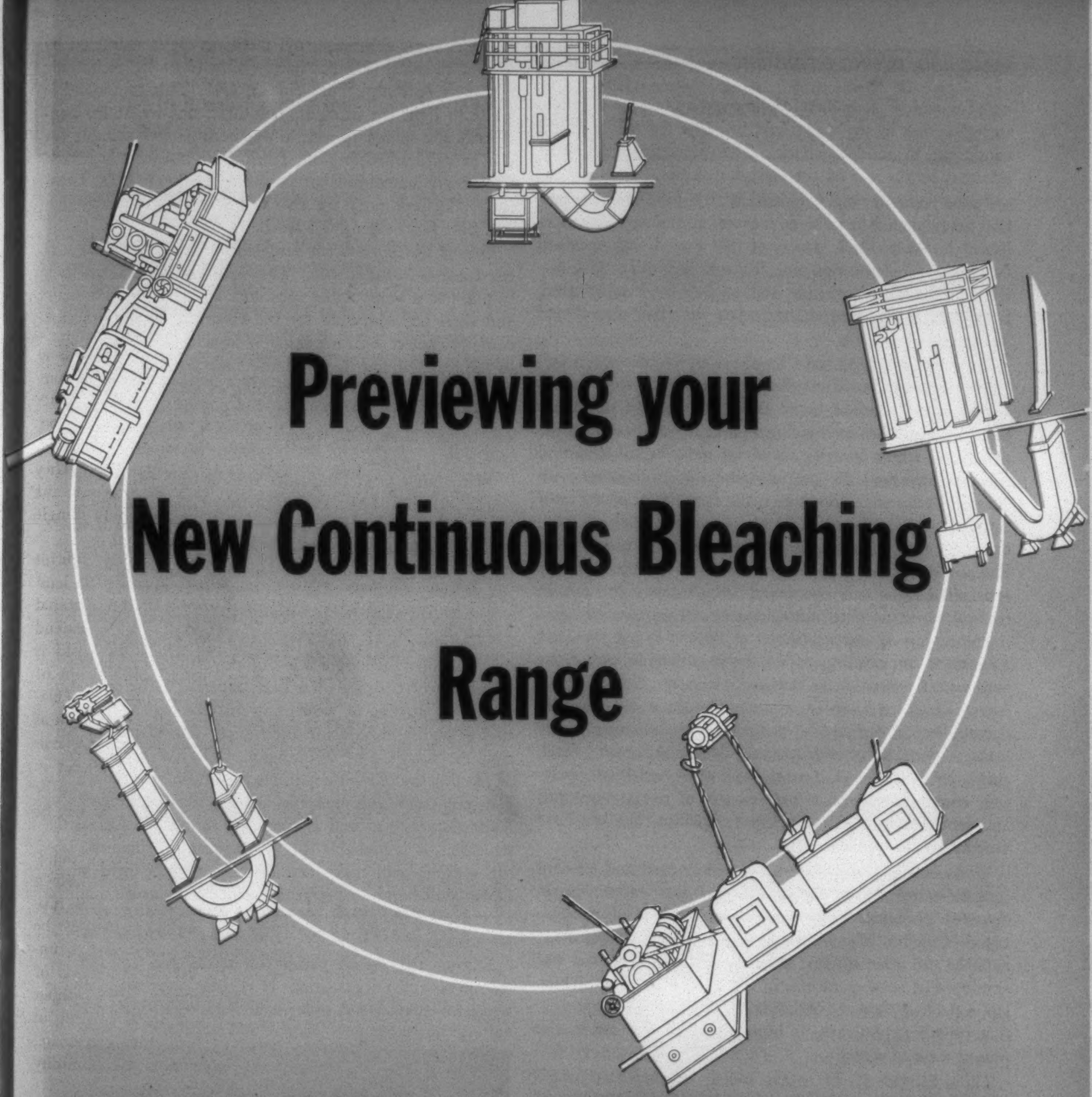
In appearance a single spore may be egg-shaped or round. In some cases the spores are enclosed within a sack known as the ascus. During germination this sack becomes ruptured and the spores are scattered by the wind. It must be emphasized that the spores are extremely resistant to unfavorable conditions and can survive for long periods of time under freezing temperatures, drought, and without food. However, when they alight on material organic in nature which offers a good source of food, they germinate, provided that the conditions of temperature and humidity are favorable.

Under proper conditions, the spore swells and ruptures the outer wall and puts out a thread-like structure, which elongates and becomes highly branched into a whole network of filaments. The life cycle is thus repeated.

It has been mentioned previously that moisture is a most important factor governing the germination of mold spores. In most cases, a minimum relative humidity of approximately 75 per cent is required, although in some cases a lower percentage of humidity is sufficient. Molds will grow over a wide temperature range from near freezing to temperatures far above 100° F. However, the most favorable conditions for growth appear to be between 80° and 90° F.

Since organic matter is an essential nutrient in the diet of molds, it is not difficult to understand why certain species thrive on cellulosic materials such as wood, rayon and cotton. The finishes put onto textile fabrics such as gelatin, oils, starch, gums, glue and casein are also attractive nutri-

Previewing your New Continuous Bleaching Range



We can show you the production figures . . . the bleaching results . . . the savings in steam, labor and chemicals. From that point on it's up to you.

You may decide that a single stage Butterworth Continuous Bleaching Range is adequate for your needs. Or you may determine that two-stage operation is best for your mill. You may want to bleach in rope form . . . or you may want to bleach in open width. You may prefer either the DuPont or the Becco process.

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ents for molds. It is therefore imperative to protect textile materials that in any way might be subjected to conditions conducive to mildew attack. The protection is usually afforded by the use of chemical fungicides.

In the years previous to World War II considerable attention was devoted to mildew prevention and we find mentioned in the textile literature of that period such chemical fungicides as paranitrophenol, thallium carbonate, 2, 4, 6—trichlorophenol, salicylanide, sodium fluoride, betanaphthol, boric acid, borax, zinc chloride, salicylic acid, phenol and its various derivatives.

However, the need for a large variety of efficient fungicides to protect the diversified equipment utilized by our armed forces resulted in an enormous amount of microbiological and chemical research both prior to an during the period of active warfare. The laboratories, of chemical manufacturers and the quartermaster depots together with other governmental laboratories, the facilities of educational institutions and the personnel in many other private laboratories were actively engaged for several years in an intensive program that resulted in the production of microbiologically resistant fabrics and equipment of all types for use in tropical warfare. This successful research program resulted in the saving of many millions of dollars in supplies and equipment, thus aiding to a very considerable extent the successful termination of the warfare in the South Pacific. The accumulated knowledge concerning the many phases of microbiological degradation and means of preventing it now makes it possible for us to preserve our fabrics, paper, food, paint, cordage, wood, leather and other essential peacetime commodities with a large variety of newly developed and much more highly efficient fungicides than we have ever had before.

Undoubtedly, one of the most widely used and efficient fungicides employed during the war was copper naphthenate. This material is a greenish colored solid, waxy in nature and insoluble in water. It is soluble in kerosene, naphtha and other organic solvents. During the war it was employed in large quantities in the mildewproofing of burlap, osnaburg, rope and webbing. It has also been reported, that copper naphthenate is highly efficient for use in the preservation of wood.

Other compounds of copper widely employed as fungicides are: copper ammonium fluoride (Protella), cuprammonium carbonate (Copapel-A), copper-8-quinolinate, cuprammonium carbonate (Cuprotela), copper oleate, copper pentochlorophenate and cupraammonium hydroxide.

Zinc compounds and compounds of mercury likewise are also employed as fungicides. The inorganic mercury salts are considered to be quite toxic to humans but the organic compounds of mercury are less dangerous. Large quantities of organic compounds of mercury (Puratized) were employed during the war for the treatment of duck. This product like many other fungicides can be applied to the fabric together with a water repellent in a single bath. Mersolite, Mertella, FD-2, Pyridose and Permacide are other compounds of mercury that have been widely employed.

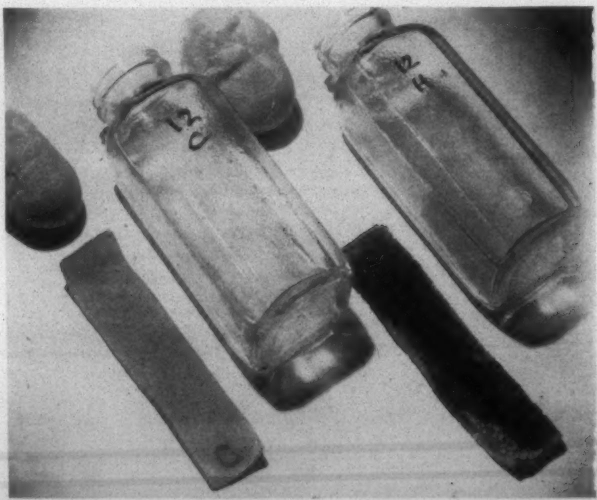
The phenolic fungicides (Dowicides) are also effective and are widely employed. Another widely used fungicide is dihydroxy-dichlor-diphenyl methane. It is marketed by several chemical manufacturers and sold under such trade names as Preventol, Fungicide-A, G-4. This compound is white to light tan in color, non-toxic, non-irritating, non-volatile and stands up well to weathering. It is suitable for use in mildewproofing of fabrics for outdoor exposure. Quartenary ammonium compounds (Hydrocide IOX, Onyx B. T. C., Zephiran) are also widely employed fungicides and have been extensively used.

One of the more recent fungicides introduced to the textile trade is Nuodex 100. This material is obtained as a solution of a non-volatile substitute amine. It is non-toxic and therefore adaptable for the treatment of fabrics that come in contact with the skin. It imparts no color or odor to the material and does not affect the hand of the treated material. Its resistance to leaching is extremely high and the high degree of rot resistance that it imparts to the fabrics makes it an ideal fungicide. It is easily applied by means of a padder.

Many other good fungicides are available for use by the textile industry. The *Textile Specialty Guide* and the *A. A. T. C. C. Year Book* list dozens of fungicides, some of which are combined with water-repellents. Fungicides are marketed by more than 50 different chemical manufacturing concerns.

It has also been shown that by impregnating cloth with certain resins an increased resistance to fungus attack is obtained. Chemical modification of the cellulose molecule by the action of chemicals has been reported as being a most promising method of preventing microbiological deterioration of textile materials in the future. Ban-Flame, by Bancroft Finishing Co. of Wilmington, Del., is a special process of reacting the cellulosic fabric to the action of certain nitrogen compounds and phosphate at high temperatures to give flame resistance as well as resistance to microbiological destruction. It is probable that in the years to come the textile industry will make vast inroads into the field where fabrics will be given permanent mildew-resistance qualities by the alteration of the chemical construction of the cellulose molecule.

During the recent period of accelerated research on microbiological degradation of textile materials, studies were also conducted in order to arrive at a satisfactory meth-



Fourteen-day Chaetomium globosum test: left one per cent Nuodex 100 S. S.; right, untreated control. ***(Photographs courtesy of Nuodex Products, Inc.***

od for testing the efficiency of the many fungicides being offered to the textile trade. When one considers that there are thousands of species of fungi and that more than 50 species are capable of destroying cellulose, it is not difficult to realize the gigantic problem that confronted the scientists and biologists concerned with this problem. In addition to the cellulose decomposers, there are a great many of the surface growing types of fungi which cause discoloration and blotches on the fabric and also impart the characteristic musty odor associated with mildew growth.

At this time it may be well to consider the manner in which cellulose is decomposed by certain species of molds. Several theories have been advanced but probably the most widely accepted view is that the cellulose-decomposing fungi secrete enzymes that react chemically with the cellulose molecule causing a breaking of the cellulose structures.

One of the most intensive programs of research concerning the behavior of textiles with respect to mildew and methods for evaluating mildew preventatives was conducted by the A. A. T. C. C. research committee during the years of the recent war. This interlaboratory testing program has resulted in tentative test procedures that are reported in detail in the 1946 *Year Book of the American Association of Textile Chemists and Colorists.* The methods provide for tests concerning the permanence of fungicides to water leaching, volatilization and weathering. The biological tests employ the active cellulose destroyer Chaetomium Globosum, and the surface growing type of mold Aspergillus Niger. These tests are carried out by placing specimens of the fabrics about 6½ inches by 1½ inches on the surface of a solid culture medium, the composition of which is reported in the 1946 *A. A. T. C. C. Year Book.* Flint square bottles about six inches high and 2½ inches square are used as a culture chamber. The agar medium is poured into the bottles while warm and the bottles are capped and placed on their sides until the agar culture medium hardens. The samples to be tested are then placed on the surface of the solid culture medium and inoculated with a suspension of mold spores and incubated for a two-week period. At the end of this period the samples are removed from the culture chamber (bottles), washed, dried and conditioned for breaking strength determinations. It is absolutely essential that all materials be sterilized prior to the microbiological tests and that the procedures be carried out under aseptic conditions. Details concerning a rigid soil-burial test are also included in the 1946 *A. A. T. C. C. Year Book.* In this test the samples are buried for periods of one to six weeks, thereby being subjected to the action of soil bacteria and cellulose destroying fungi. Control samples (no fungicide) are also buried together with the treated samples and at the end of the test period breaking test determinations are made in order to determine the amount of destruction caused by the soil organisms.

It is important to understand that the various species of molds often react differently to the various types of fungicides that are applied to textile fabrics. In some cases a particular fungicide might be very effective and under other conditions its effectiveness might be greatly inferior to another type of mildew preventative. Therefore it is advisable that persons unfamiliar with mildew-proofing or with methods of protecting other materials from the action of micro-organisms consult experts on this subject before attempting to apply treatment. Practically all the reputable chemical manufacturing concerns have among their technical personnel experts who are capable of making sound recommendations.

Fundamental Research In Wool Shrink Resistance

THE importance of fundamental research on the problem of shrink-resistant wool is emphasized by the action being taken by the Office of the Quartermaster General with respect to obtaining a shrink-resistant shirting fabric. In 1944, long-range investigations were initiated by the O. Q. M. G. and jointly carried on by the Philadelphia Quartermaster Depot, Harris Research Laboratories and cooperating members of industry. The entire program was designed to enlarge the existing fund of basic scientific data necessary for the development of more efficient Army fabrics. Among the early practical results of the studies was the shrink-resistant treatment for Army socks, developed in time for large-scale use during the war. The new phase of the program is extending the range of the earlier investigations and enlarging the number of factors under examination.

Among the fundamental characteristics of the wool fiber which are receiving attention in current studies are such mechanical factors as frictional properties and resiliency, and the mechanism of the reactions between wool and various chemical agents. Earlier research at the Harris Research Laboratories under the sponsorship of the Office of the Quartermaster General indicated the importance of these factors in the problem of wool shrinkage and its control. The policy of the Research and Development Branch has been to make the results of these studies available to the industry as expeditiously as possible. Thus, a paper entitled "Some Factors Contributing to the Felting of Wool," by Milton Harris, was presented at the 1944 annual meeting of the American Association of Textile Chemists and Colorists. This paper reviewed various theories of felting and discussed the "curling tendency" of hairs and its relationship to felting. An article by Frishman, Smith and Harris ("Relation of Fiber Diameter to Modification of Wool Resulting from Chemical Processing") was published in the April, 1946, *Textile Research Journal;* experiments were reported which showed that fine fibers were more affected than coarse fibers by chlorination in baths of equivalent strength. In August, 1947, the Office of Technical Services, U. S. Department of Commerce, released an extensive report entitled "The Treatment of Army Socks for Shrink Resistance by the Quartermaster Corps" (O. Q. M. G. Textile Series Report No. 46), prepared jointly by the staffs of the Harris Research Laboratories and the Philadelphia Quartermaster

Depot's Textile Research Laboratory. The report reviewed the background of the problem, described the development of the test methods for measurement of sock shrinkage and degree of fiber modification, and discussed the results of laboratory tests of four types of shrink-resistant treatments. A concluding section compared the effects of the various treatments on surface scale structure and frictional properties and presented data on the effect of pH on the chlorination process.

This last subject has been treated at greater length in a paper by Harris and Frishman ("Some Aspects of the Chlorination of Wool to Produce Shrink Resistance") published in the *American Dyestuff Reporter*, Jan. 26, 1948, and in an article by Frishman, Hornstein, Smith and Harris ("Reaction Between Wool and Active Chlorine") scheduled for early publication in *Industrial and Engineering Chemistry*. A paper by Frishman, Smith and Harris, now in preparation, discusses the measurement of friction in wool fibers. Of primary importance among the disclosures contained in this series of papers are the existence of a directional frictional effect which contributes largely to felting shrinkage, the fact that control of felting shrinkage by chlorination is most effective in certain pH ranges, and the fact that the chlorination reaction is most easily controlled on the alkaline side. In addition, the studies show that the control of other parameters, such as time, temperature, and concentration of available chlorine, is of great importance in the successful reduction of felting shrinkage by chlorination.

The investigations just described are continuing and are now being extended into a new phase of the research program of the O. Q. M. G. at the Harris Research Laboratories. It is known that wools of different origin vary widely in their inherent ability to felt; preliminary studies have also indicated that shrinkage is influenced by the type of construction employed in the yarns and fabrics.

A series of experiments is planned in which wools of different origins will be made into top and subjected to mild, "optimum," and severe degrees of shrink-resistant treatment. The top will be spun into yarn of different counts on both the Bradford and French systems, and with varying amounts of twist. Portions of each sample of yarn will then be knitted into fabrics employing several types of stitch and using normal, tight and slack constructions. Both relaxation shrinkage and felting shrinkage in these fabrics will be evaluated and related to fiber origin, degree of shrink-resistant treatment, and yarn and fabric construction. It is expected that data provided by these tests will indicate the best degree of shrink-resistant treatment for different types of Army fabrics and may lead to improved constructions from the point of view of dimensional stability.

Southern A. A. T. C. C. Units Have Meetings

Pleasure came before business, at least for a short time, as the Piedmont Section of the American Association of Textile Chemists and Colorists held its Summer outing at Myrtle Beach, S. C., June 18. Prior to electing new officials for 1948-49, members of the Piedmont Section relaxed with golf, tennis, swimming and dancing. New officers of the unit are: Paul E. Smith of Riegel Textile Corp., Ware Shoals, S. C., chairman, succeeding John B. Neely of Burlington Mills Corp.; Robert H. Smith of Melrose Mills, Inc., High Point, N. C., vice-chairman; Edwin A. Briggs of Southern Franklin Process Co., Greenville, S. C., secretary; R. Hobart Souther of Cone Mills Corp., Greensboro, N. C., treasurer. A. R. Thompson of Ciba Co., Inc., Charlotte, N. C., was re-elected custodian and publicity chairman. National councilors re-elected were Wyss L. Barker of National Aniline Division of Allied Chemical & Dye Corp., Charlotte, and Leland G. Atkins of Southern Dyestuff Corp., Charlotte, Retiring Chairman Neely was named a national councilor replacing Sidney M. Cone of Proximity Print Works, Greensoro.

The A. A. T. C. C. Southeastern Section was to have met July 24 at the Ansley Hotel in Atlanta, Ga. Scheduled on the afternoon technical program were two papers, "Research Aspects of Cotton Finishing" by W. B. Strickland of the Southern Regional Research Laboratory, U. S. Department of Agriculture, New Orleans, La., and "Package Dyeing" by Herman J. Jordan, Jr., of Wiscasset Mills Co., Albemarle, N. C. James V. Carmichael, president of Scripto, Inc., Atlanta, was to have been the banquet speaker.

Committees in charge of the 27th national convention of the A. A. T. C. C., scheduled Oct. 21-23 in the Sheraton-Bon Air Hotel at Augusta, Ga., have mailed full particulars relative to the gathering to all members Applications for hotel reservations are to be mailed not later than Aug. 10.

A Standing Merchandising Committee has been named by the national association to control all questions of policy in connection with the production and distribution of testing apparatus, test fabrics and standards. Appointed to the committee were H. F. Hermann, Dr. H. C. Chapin, W. R. Moorehouse, J. R. Bonnar and Dr. H. W. Stiegler.

Wrinkl-Shed Goods In Volume Output

Wrinkl-Shed cotton has stepped out of the conversation stage and gone into volume production. J. M. Hughlett, vice-president and general sales manager of Dan River Mills, Inc., announced recently that over one million yards of Wrinkl-Shed dress goods are being delivered to dress manufacturers across the country and will reach the November-December markets in all types of garments.

Last August Dan River Mills made news in the cotton industry by revealing that after four years of research it had successfully applied Wrinkl-Shed to cotton, giving a resin finish which makes cotton resistant to wrinkles and gives the fabric the resiliency of fine worsted. First to reach the market with wrinkle resistant cotton last year, Dan River is first again in volume production. Wrinkl-Shed made its debut in a limited 25,000 yards last Fall. Added to the current one million yards in the dress goods field, the mill has extended this finish to its cotton rainwear and sports shirtings. Three-quarter million yards have been produced in Wrinkl-Shed rainwear to date with another three-quarter million estimated for production by the end of the year. Wrinkl-Shed will be applied to cotton twill sports shirtings for the first time this fall with an initial yardage of approximately 600,000. The total for the combined departments is over three million yards.

The Wrinkl-Shed dress fabrics are produced in two types, Dancord and Skytop. The former is a combed, corded suiting in a selection of eight colors ranging from pastels to dark tones and adaptable to dresses, suits and play

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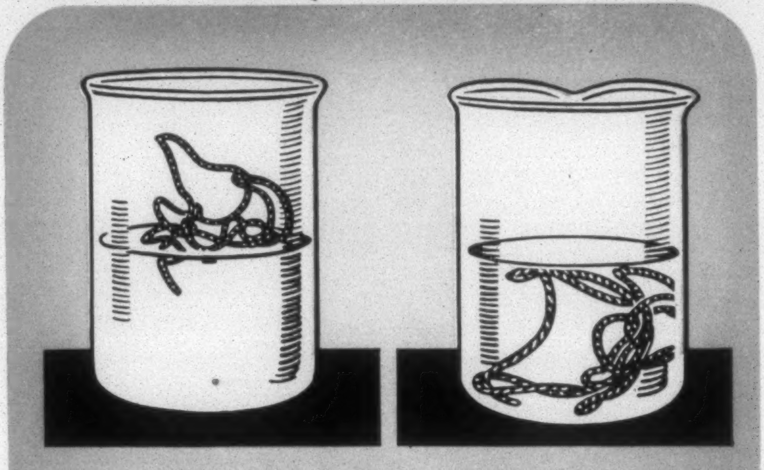

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You get speedier application in the wetting of textiles — better penetration, dispersing and dye levelling properties — when you standardize on Cyanamid's DECERESOL* OT Wetting Agents, now again available in larger quantities.

But that is only *one* side of the story. DECERESOL OT Wetting Agents are also very economical to use. A little of it goes a long way. Its efficiency lowers costs, saves time.

And don't forget this *third* important advantage: the continual use of DECERESOL OT Wetting Agents results in *higher quality production*, as well.

If you are not now using DECERESOL OT Wetting Agents, it will pay you to write for further information about these superior wetting agents. Or, if you wish, one of our representatives will be glad to call and demonstrate DECERESOL OT Wetting Agents to you personally.

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clothes. Skytop, a cotton tweed for sports, beach, play suits and separate skirts, comes in plains, dark iridescent plains, plaids in muted tones and multi-color block plaids. Both types are woven of vat-dyed yarns and sanforized. Their individuality, however, is the durable Wrinkl-Shed finish which not only improves the appearance of the fabric itself, but makes it resistant to wrinkling during wear and less prone to absorb soil, two factors which cut down the frequency of laundering and the necessity of pressing after each wearing. As in fine wools wrinkles disappear when the garment is hung up over night.

In addition to these types of cottons work is progressing continually in the mill laboratories to meet Dan River's eventual goal of making all types of cotton fabrics wrinkle resistant.

Du Pont Opens Coated Fabrics Lab

A new Du Pont laboratory, devoted to research and development work in the field of coated fabrics and allied products, was opened at Newburgh, N. Y., July 1. The three-story building of reinforced concrete and brick contains the most modern equipment for the development and testing of coated fabrics and sheetings under all sorts of conditions.

The new facilities will permit the Du Pont Co. to enlarge the scope of its scientific research in a field in which it has been interested for nearly 40 years. They will be used both in connection with research for the improvement of existing products and processes as well as for investigations looking to the development of new products.

The laboratory is directed by R. E. Thomas and is part of the Chemical Division of Du Pont's Fabrics and Finishes Department. Mr. Thomas is a graduate of Cornell University, and has been engaged in chemical research on finishes, coated fabrics, and allied products for the Du Pont Co. since 1922. He has been located at Newburgh since 1930, and has been director of the laboratory since 1945.

The new building is located at the corner of Du Pont Avenue and Thompson Street on the property of the company's Newburgh plant, which manufactures Fabrikoid pyroxylin coated fabrics, Fabrilite vinyl plastic resin coated fabrics, Tontine pyroxylin impregnated window shade fabric, bookbinding materials, and other coated and impregnated fabrics and sheetings for many industrial uses.

Included in the equipment of the laboratory are places where all sorts of weather conditions may be simulated. For example, a new product can be tested in a room maintained at a temperature of 20° below zero. In others, the effects of high temperature and humidity or of outdoor exposure can be studied. The most modern equipment for testing tensile strength, ability to resist fading, flex resistance, flame resistance, etc., are available in the new building.

The laboratory also has a series of rooms where teams or groups may work on problems assigned them. These rooms are so constructed that the equipment may readily be re-arranged into any combination desired. Administrative offices, a library, dark room for photographic work, conference rooms, and various other offices and work rooms are also included.

Drawings and specifications were prepared by The Ballinger Co., architects of Philadelphia, working closely with engineers and chemists of the Du Pont Co. The contractor was B. M. Higginson of Newburgh.

Bancroft Uses Resloom C On Seersucker

Seersucker, wrinkled sourpuss of the cotton wearing apparel family, has been given a face-lifting. That grumpy look which seersucker suits assume after brief wearing has been erased by the new finishing process announced by Monsanto Chemical Co. The announcement disclosed that Joseph Bancroft & Sons Co. has developed the new process, employing the use of Monsanto's Resloom to make fabric wrinkle resistant.

The Resloom formula, a melamine formaldehyde resin, has been used over a fast-growing range of cotton fabrics, but until today no finishing plant had announced its successful application to seersucker, most troublesome of fabrics from wrinkling standpoint. Goods carrying the new finish, called Stazenu, already are in production.

The Monsanto announcement said that a test of Bancroft seersucker showed it had wrinkle recovery of 136°, which is comparable to that of good worsteds. In addition to supplying a high degree of wrinkle resistance, the finish stabilizes fabric and provides it with resilience designed to hold garments' natural freshness and tailored appearance in hot, humid weather, according to Monsanto. The announcement also pointed out that natural lustre and texture porosity of cloth is not affected, nor is the finish removed by repeated washings or dry cleaning.

Chemical Conference Runs With Exposition

"The program of the National Industrial Chemical Conference is running concurrently with the National Chemical Exposition under the same roof at the Chicago Coliseum Oct. 12-16, 1948," says Dr. Charles L. Thomas, chairman of the Chicago Section of the American Chemical Society, sponsor of the international conference and exposition. Dr. Thomas announces that the program, almost complete, contains the names of 18 world famous speakers discussing subjects that will have interest for the executive and technical personnel of all industry—chemical and non-chemical (chemical consuming).

The National Industrial Chemical Conference program is designed to be of particular help to non-chemical (chemical consuming) industry and small business firms. For Tuesday, Oct. 12, there will be three speakers on three subjects under the general heading of "Chemical Markets." On Wednesday afternoon, Oct. 13, five speakers will talk on five subjects under the general heading of "Chemistry in General Industry." Wednesday evening, three speakers are scheduled to talk on three subjects under the general heading, "Hazards from Chemicals."

The program for Thursday afternoon, Oct. 14, is not complete at this time, but the general subject is "Management of Research." The program is being arranged by the Industrial Research Institute and it will be designed to be helpful to small business. Friday afternoon, Oct. 15, there will be four speakers on four subjects under the general heading of "Frontiers of Chemistry." Friday evening there will be three speakers on three subjects under the general heading of "Pilot Plant Use by the Chemical Industry."

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Mills like Lippitt appreciate the Sandoz policy of "thinking ahead with textiles", and among the Sandoz developments being followed with great interest is the contribution of Sandoz Metomega Chrome Colors to the time-saving Metachrome method. Among the colors in the Metomega line are the following, which offer a great variety of shades:

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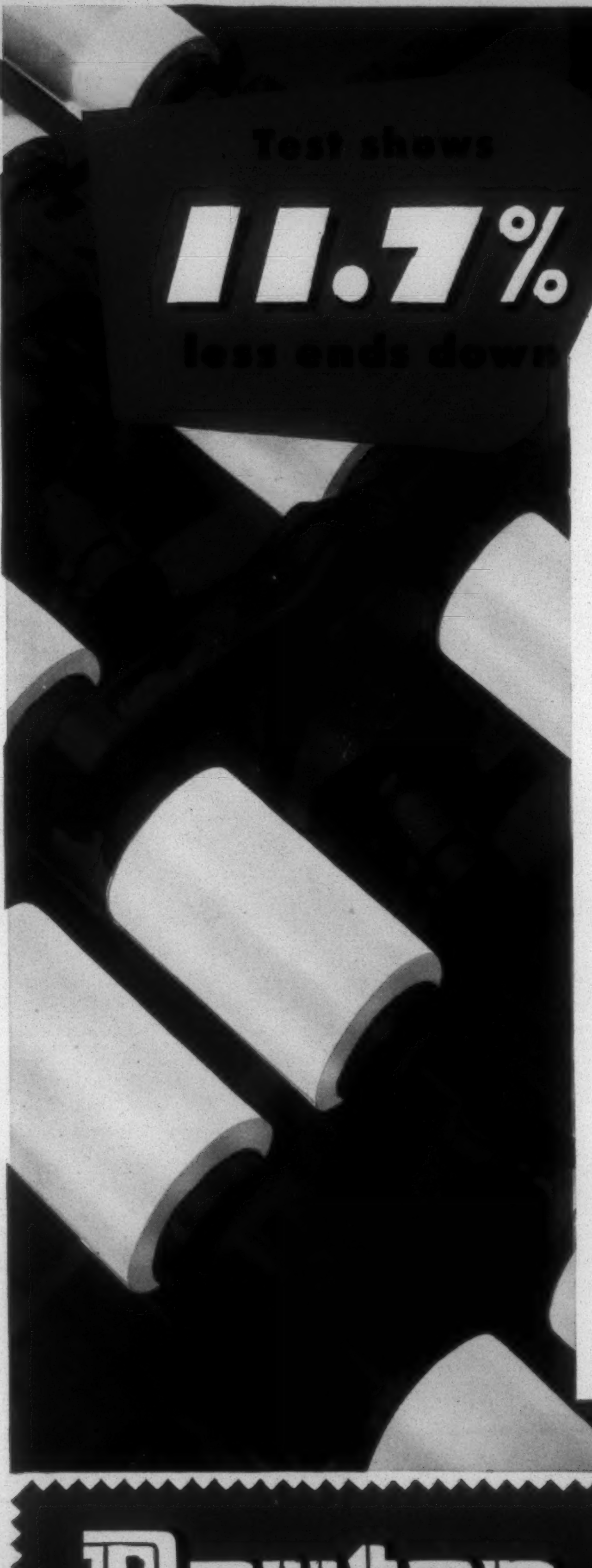

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In a test in which 1,134 spindles were observed and which covered 13,261 spindle hours in a large southern mill, *Dayco* Roll Coverings showed fewer lap ups on top and bottom rolls and 11.7% less unclassified ends down. Actually, there were more than three times as many lap ups on the bottom rolls where competitive roll coverings were used, although all the bottom steel rolls had just been reworked and were in top operating condition. Both the *Dayco* and competitive roll coverings had been in use from three to four months at the time the test was conducted.

Test after test, under actual operating conditions, proves that *Daycos* run with 10% to 50% fewer ends down than other makes of roll coverings. *Daycos* consistently outperform other roll coverings because they are built with exactly the right amount of cushion and the correct coefficient of friction. *Daycos* are not affected by temperature or humidity. They retain their superior physical properties throughout their long service life. In fact, the characteristics of *Dayco* Roll Coverings are such that *Dayco's* surface drafting properties improve with use.

Put *Daycos* on some of your frames and test them yourself. Let them prove for themselves that they will give you better service and longer service at less cost. For complete information, write *Textile Products Division, The Dayton Rubber Company, Woodside Bldg., Greenville, S. C.*

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PERSONAL NEWS

William C. Summersby has resigned his position as executive vice-president and general manager of the Ware Shoals (S. C.) Division of Riegel Textile Corp. to become assistant to Elliott White Springs, president of Springs Cotton Mills, Lancaster, S. C. Mr. Summersby rejoins the Springs organization, having been connected with the concern in 1940-42 as manager of the three Springs plants at Chester, S. C. . . . Marchant C. Cottingham of Wellford, S. C., is now assistant manager to R. H. King at the Springs Lancaster plant. . . . W. H. Wolfe has resigned as superintendent of carding at the Lancaster unit to accept a similar position with Martha Mills, textile division of the B. F. Goodrich Co. at Thomaston, Ga.

A. E. Staley, Jr., president and chairman of the board of A. E. Staley Mfg. Co., Decatur, Ill., has been appointed head of the Economic Co-operation Administration mission to Norway. Mr. Staley, 45, has been president of Staley since March, 1932, and president and chairman of the board since March, 1941. . . . Ed Scheiter, executive vice-president, will be the company's chief executive during Mr. Staley's foreign service. . . . Paul D. Doolen, left above, for the past four years general attorney for A. E. Staley Mfg. Co., has been named manager of the industrial sales department of the company. . . . In his new position Mr. Doolen will be ably assisted by Ivan F. Wieland, center, who has been assistant industrial sales manager for ten years. Under the new arrangement Mr. Wieland is taking over additional duties. . . . Henry Volle, right, for the past two years assistant advertising manager, has been promoted to advertising manager of the firm. He formerly was connected with R. R. Donnelley & Sons Co. of Chicago.

R. E. McTigue has resigned as general superintendent of the Unity Spinning Plant of Callaway Mills, LaGrange, Ga., to enter business in Albany, Ga. Mr. McTigue was a member of the LaGrange City Council and Lewis Price, vice-president and general manager of the MMC Division at Callaway, was elected to fill the council vacancy. J. D. Maddox was named to succeed Mr. McTigue as superintendent of the Unity Spinning Plant.

Walter Regnery, who has been vice-president and general manager of Joanna Cotton Mills Co., Goldville, S. C., since the death in February of W. A. Moorhead, has been elected president of the firm. Other officers named include: P. B. Mitchell, assistant to the president; F. L. Regnery, vice-president; A. D. Barron, secretary; J. B. Hart, treasurer; J. L. Delany, general superintendent; W. K. Waits, assistant general superintendent. Messrs. Hart, Delany, Barron and Waits were named to the board of directors as new members.

Fred Langford has resigned as assistant superintendent of Union Bleachery, Greenville, S. C., to establish a manufacturing and shipping plant for pulpwood and veneer. Mr. Langford has been succeeded by Lucius Delk, who takes over his new duties after service as head of the bleachery laboratory.

The following personnel transfers in Carolinas plants of the Harden Mfg. Co., Gastonia, N. C., were effected during June: At Warrenton, N. C., J. T. Marshall was promoted from assistant superintendent to superintendent of the Peck Mfg. Co., replacing Roy Dixon. . . . Mr. Dixon was transferred to Fayetteville, N. C., as superintendent of the Tolar-Hart-Holt Mills, replacing J. T. Byrum. . . . Mr. Byrum was transferred to Harden Mfg. Co. No. 2 Plant at Rock Hill, S. C., as superintendent of that plant to succeed George Rutledge. . . . Mr. Rutledge was transferred to Harden's No. 2 Plant at Dallas, N. C.

Robert S. Small of Greenville, S. C., formerly vice-president and assistant treasurer, has been elected president and treasurer of Ottaray Textiles, Inc., of Anderson, S. C. Mr. Small succeeds the late Harry Haynsworth, who died several months ago. As head of the Ottaray corporation Mr. Small will direct operations of the Ottaray plant and the new Haynsworth mill nearing completion in Anderson.

J. Aubrey Marshall, president of Wellington Mills, Inc., Anderson, S. C., recently was installed as president of the Anderson Rotary Club. . . . Carl R. Harris, vice-president of Erwin Cotton Mills Co., Durham, N. C., has been named president of the Durham Rotary Club and N. A. Gregory, assistant secretary of Erwin, has been named to the board of governors of the North Carolina Traffic League. . . . Calvin McCombs, assistant superintendent of Belton (S. C.) Mills, has been elected president of the Lions Club in that city. . . . A. J. Wysong, buyer for Carolina Mills, Inc., Maiden, N. C., recently was installed as third vice-president of the Maiden Lions Club. . . . Dr. William McGehee, director of personnel research at Fieldcrest Mills, was elected president of the North Carolina Psychologists Association at the group's annual meeting recently. . . . Jarvis Cromwell, president of William Iselin & Co., Inc., factors, has been elected a director of the New York Board of Trade.

James H. Wilson, Jr., special assignments chemist at the Rome, Ga., unit of the Celanese Corp. of America, has been chosen to supervise the chemical laboratory in the company's new viscose plant in Mexico.

Harry F. Creegan, left, former head of the dyeing and finishing division of the American Viscose Corp. Textile Research Department, has resigned that post to accept an appointment as a sales engineer for the textile machinery division of Rodney Hunt Machine Co., Orange, Mass., maker of textile wet finishing machinery. Mr. Creegan, who has had 21 years experience in the dyeing, printing and finishing industries, will be in charge of cotton, silk and rayon equipment sales in Pennsylvania, New Jersey, Maryland, Delaware, northern Virginia and northern West Virginia. . . . Jackson A. Woodruff has been named by Viscose to succeed Mr. Creegan. The textile development laboratory division, which Mr. Woodruff founded last year, will be merged with the dyeing and finishing division.

M. E. Garrison, superintendent of Glenwood Cotton Mills at Easley, S. C., since Aug. 1, 1905, resigned that post July 1. W. P. Nicholson, formerly overseer of the cardroom, has been named to succeed Mr. Garrison.

Warren L. Hadley has been named vice-president in charge of production of Glen Raven Silk Mills of Altamahaw and Burnsville, N. C. He was for 11 years superintendent of the mill at Altamahaw.

Charles A. Cannon of Cannon Mills, Concord, N. C., and John F. Matheson of Syntex Corp. and Mooresville Mills, Mooresville, N. C., have been named as trustees of the North Carolina Vocational Textile School at Belmont.

Edwin Lord has resigned as executive vice-president of Jerry Rossman Corp. and has assumed executive duties with Charles W. Carvin Co., Inc. For a number of years Mr. Lord was connected with Aberfoyle Mfg. Co. of Chester, Pa., as vice-president and general manager and for several years prior to World War II was president of Aberfoyle, Inc., of Norfolk, Va.

P. W. Coleman, left, a graduate textile engineer of Clemson College, Clemson, S. C., and associated with sales engineering in the textile industry since 1930, has been appointed by the Emmons Loom Harness Co. of Lawrence, Mass., as exclusive representative in North and South Carolina. Included in the extensive line of textile supplies carried by Emmons are steel heddles, heddle frames, reeds, selvage harness, slasher and striking combs, Emmons loom strapping, plastic sheaves, tape tension idlers and other items. Mr. Coleman will make his headquarters in Greenville, S. C.

French Campbell, for the past 2½ years president of Campbell Fabrics Corp. of Charlotte, N. C., has joined Bloom Mills, Inc., of Gastonia, N. C., Monroe, N. C., and Lancaster, Pa., as general manager. Prior to starting Campbell Fabrics, he was with Carter Mills, Lincolnton, N. C.

H. M. Bailey, Jr., has joined Hartford Rayon Corp. as head of sales development for the specialty rayon yarns of the firm. He formerly was connected with Tula Fabrics Corp., Textron, Inc., and North American Rayon Corp.

Vernon L. Kite of Gaffney, S. C., Helen R. Esslinger of Huntsville, Ala., James W. Cleveland, Jr., of Guntersville, Ala., and Joel S. Graham of Albertville, Ala., have been awarded four-year scholarships by the Leon Lowenstein Foundation, Inc. Ten such scholarships are awarded annually to students who have a parent or close relative employed by M. Lowenstein & Sons, Inc., or any subsidiary. The additional awards will be disclosed later. . . . Richard Thomas, son of J. O. Thomas of the personnel department at Fieldcrest Mills, Spray, N. C., recently was awarded a $1,000 scholarship at Phillips Exeter Academy at Exeter, N. H.

Robert C. Landon has been appointed manager of industrial relations of the Rohm & Haas Co. and the Resinous Products & Chemical Co., Philadelphia. He is a native of Chicago, Ill., and a graduate of Yale University.

Joe H. McLure, for 17 years Southeastern area manager for the Cotton Branch of the Production and Marketing Administration, U. S. Department of Agriculture, with headquarters in Atlanta, Ga., has been named to head the cotton marketing research section of the branch's Research and Testing Division in Washington. H. K. Tinsley, a native of Greenwood County, S. C., and for the past five years assistant manager of the Atlanta office, has been designated to succeed Mr. McLure.

H. B. Richardson has resigned as head of the cotton department of Union-Buffalo Mills Co. after 23 years service and has been succeeded by J. E. Rowan of Wilmington, N. C.

Marshall Newell has assumed management of export sales for the Draper Corp., Hopedale, Mass., following the retirement of Harland E. Cate. . . . William F. Northrop has succeeded Mr. Newell as Northern sales representative and John D. Marshall, formerly with the Northern sales force, has been transferred to the sales force of the Spartanburg, S. C., territory. . . . J. Craig Huff, Jr., and John R. Smart, recent additions to the sales staff, will work in the Hopedale and Atlanta, Ga., territories, respectively.

William S. Nutter resigned recently as vice-president of Goodall-Sanford, Inc., after almost 60 years service with the Goodall enterprises. Mr. Nutter has been responsible for inventing many fabrics, including the famous Palm Beach cloth.

Milton D. Crawley has resigned as assistant superintendent of Broadnax (Va.) Cotton Mills to accept the position of general overseer of the No. 7 Plant of Erwin Cotton Mills Co., Neuse, N. C.

Leland M. Howland, assistant superintendent of Harriett Cotton Mills, Henderson, N. C., was married July 3 to Helen M. Pace of Kittrell, N. C.

Dr. Raymond B. Seymour, formerly director of the University of Chattanooga's industrial research institute, Chattanooga, Tenn., has been named director of the special products research division of Johnson & Johnson at New Brunswick, N. J.

William G. Duke of Greenville, S. C., has been appointed a sales representative for the W. D. Dodenhoff Co., Inc., manufacturer of industrial leather and rubber specialties. Mr. Duke will make his headquarters at the parent plant in Greenville.

Fowler Jackson, who recently resigned his position at the Riegel Textile Corp. plant at Trion, Ga., has accepted a position as superintendent of mercerizing at Sellers Mfg. Co. at Saxapahaw, N. C.

Emil S. Davis, assistant treasurer and export manager of Standard-Coosa-Thatcher Co., Chattanooga, Tenn., will leave by plane the latter part of August for a month's trip in South America.

Frank Stewart, formerly of Dan River Mills at Danville, Va., is now overseer of carding at Profile Cotton Mills, Jacksonville, Ala.

Dr. Gerald J. Leuck, director of research of the Glyco Products Co., Inc., has been transferred to the Natrium, W. Va., plant and promoted to the position of technical director. Dr. Herbert Fineberg will act as his chief chemist. . . . Samuel Cohen, formerly senior chemist for Glyco, has been appointed chief chemist of the Brooklyn, N. Y., research laboratories until they are transferred to Natrium, when he will assume the duties of liaison and co-ordination between the research, pilot plant and production departments.

Howard L. Jenkins has been appointed manager of the Diastafor Department of Standard Brands, Inc. He has sold Diastafor for the past 29 years, aiding the textile industry in solving de-sizing problems in connection with dyeing, bleaching and finishing operations.

Recent additions to branch and regional sales and service staffs of Brown Instrument Co. follow: Atlanta—G. L. Ferguson assigned as a sales engineer; Charlotte—W. Williamson, Jr., service engineer, and R. J. Holt, sales engineer; Dallas—Robert Harris, Jr., sales engineer; Houston—C. D. Walker, sales engineer.

Myron J. Coplan of Brooklyn, N. Y., for the past six years production manager of the Montrose Chemical Co. of Newark, N. J., has joined the research staff of the Institute of Textile Technology, Charlottesville, Va., in the chemical engineering division. . . . F. W. Simpson of Columbia, S. C., formerly associated with the Atomic Energy Commission in Oak Ridge, Tenn., has been added to the editorial staff of the institute.

John McArthur, formerly connected with an accounting firm in Winston-Salem, N. C., has joined the executive staff of Erwin Cotton Mills Co., Durham, N. C., and will assist the officers of the company in correlating all phases of the company's activities, including finances, costs, purchasing and production.

Samuel B. King has been named assistant superintendent of Saratoga-Victory Mills, Guntersville, Ala.

Noah Gibson has resigned as manager of Pee Dee Mills, Inc., Rockingham, N. C., to become general superintendent of Randolph Mills, Inc., Franklinville, N. C. He succeeds E. B. Caldwell, resigned.

Harry S. Messersmith, sales manager in the Seneca Division of United Merchants & Manufacturers, Inc., has become the first employee to receive the benefits under the company's employee retirement pension plan, having reached the age of 65. Mr. Messersmith joined United Merchants in 1928 and will continue with the company in his present capacity.

J. A. Buchanan of Anderson, S. C., general traffic manager for LaFrance Industries, Inc., operator of plants at LaFrance and Pendleton, S. C., was elected head of the Piedmont Traffic Club at a recent meeting of the newly organized group in Greenville, S. C. C. P. Gordon, traffic manager for Riegel Textile Corp. at Ware Shoals, S. C., was named to the board of governors.

E. W. Yates, a partner in Yates Bleachery Co. at Flintstone, Ga., has been elected to the board of directors of the Pioneer Bank at Chattanooga, Tenn.

John W. Arnall has been promoted from general foreman to assistant superintendent of the finishing plant at Fieldcrest Mills,

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Spray, N. C. . . . Roy Martin and Billy Brown, formerly loom fixers, have been promoted to assistant foremen in the rayon mill weave room.

Beekman Hilton, formerly connected with Abbeville (S. C.) Mills Corp., has been promoted to the superintendency of the new Pendleton (S. C.) Mill of the Deering, Milliken chain, now nearing completion.

Walter Gruenwald of Charlotte, N. C., has been named sales manager of the Cecil H. Jarrett Co., Inc., of Newton, N. C., chemical and sanitary specialists.

OBITUARY

Walter L. Lingerfelt, 54, an overseer at Sellers Mfg. Co., Saxapahaw, N. C., died recently at Duke Hospital, Durham, N. C. Survivors include his wife, two daughters, two sons, two sisters and four brothers.

William E. Hendrick, 47, Birmingham, Ala., secretary and treasurer of Alabama Mills, died recently.

Col. Harry M. Rhett, 74, prominent industrialist of Huntsville, Ala., died July 7 of a heart attack following a long illness. He was treasurer and general manager of Dallas Mfg. Co., a director of the First National Bank and the Planters Cotton Warehouse Co. in Huntsville. Surviving are his wife and a son.

Abram T. Eastwick, 82, a director since 1894 and former president of James Lees & Sons Co., died July 12 at his home in Norristown, Pa. Survivors include his wife, a daughter, and a son, Joseph, president of James Lees & Sons Co. plant at Glasgow, Va.

Max Yankauer, 82, chairman of the board of Mill Factors Corp., New York, died recently after a long illness. He leaves his widow, a son, Walter D., vice-president and treasurer of the company, two brothers and a sister.

William P. Hamrick, general superintendent of the Pacific Mills unit at Columbia, S. C., from 1915 until his retirement in 1941, died recently at his home in Columbia.

W. Irving Bullard, 66, of Charlotte, N. C., nationally known manufacturer of textile mill supplies, died June 28 at a Charlotte hospital following an illness of two weeks. A native of Waltham, Mass., Mr. Bullard's business career incuded activities in many fields. He organized and was first president of Colonial Air Transport, the first airline between Boston and New York. He was at various times during his career bond market editor of the *Wall Street Journal,* vice-president of banks in Boston and Chicago, mayor of Danielson, Conn., for three terms and vice-president of the Boston Chamber of Commerce. For many years head of E. H. Jacobs Mfg. Co. in Charlotte, Mr. Bullard only recently merged the Charlotte company with three in Connecticut and was chairman of the board for the new Bullard Clark Co. In addition to his ability as a businessman, Mr. Bullard gained recognition in 1944 with his invention of Plyweld, the plastic picker stick. He was also a lecturer and writer on economic, financial and industrial subjects. Surviving are his wife and five children.

A. Felix du Pont, Sr., 68, a director and former vice-president of E. I. du Pont de Nemours & Co., died June 29 at his Summer home in Pehoboth Beach, Del., after a short illness. Surviving are his widow, three daughters and a son.

Eugene Holt, 72, one of the founders of Burlington Mills Corp. and a director of the firm since its organization, died July 2 at his home in Richmond, Va. A native of Alamance County, N. C., Mr. Holt in June, 1893, went to work in Aurora Mills in Burlington, N. C., with his father and advanced rapidly and soon became the head of the organization. Surviving are his widow, a daughter, two brothers and two sisters.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

GREENSBORO, N. C. — Three new construction projects are underway here at units of Cone Mills Corp. Ground has been broken for a new office building at the Proximity Plant and the brick structure is expected to be completed within six months. . . . A new opener room is under construction at the White Oak Plant and this project also is expected to be completed within six months. The structure will measure 147 by 100 feet and will contain 24 openers designed by the company which will enable the worker to feed an entire bale into a machine at one time. . . . A $200,000 housing project is planned at Proximity Street and Summit Avenue, to be comprised of 40 five-room, $5,000 homes. The homes will be rented as a business venture, with Cone employees given priority.

CHATTANOOGA, TENN.—The first unit of the five-unit, $20,000,000 nylon plant of E. I. du Pont de Nemours & Co., Inc., went into operation July 19 and other units will start production as soon as the work of installing and adjusting machinery is completed. Officials state that it will probably be four or five months before full production is reached.

CHILDERSBURG, ALA. — The rayon yarn plant being established here by Beaunit Mills, Inc., at the site of the former Alabama Ordnance Works, is expected to begin operations next January employing about 400 persons. A provisional exemption from county ad valorem taxes for the ten-year period permitted by law has been granted the firm. In granting the exemption, the court said that the financial structure of the firm would be re-examined at the end of five years with the understanding that the plant will be placed on the tax rolls if it is "operating in the black" at that time.

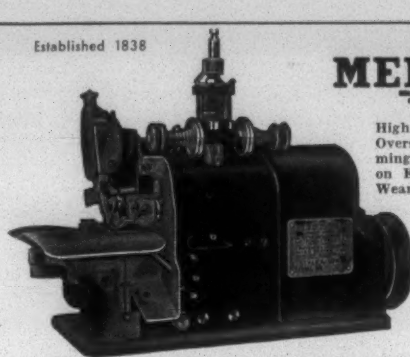
STATESVILLE, N. C. — Statesville Cotton Mills, a unit of Burlington Mills Corp., Greensboro, N. C., has been sold to Seminole Mills, Clearwater, S. C., a division of United Merchants & Manufacturers, Inc., New York. Included in the sale were the buildings of the Statesville Cotton Mills, office building and warehouses. Burlington will move its machinery to other Burlington plants and Seminole will install its own equipment. Seminole will operate at Statesville as a rayon and spun rayon spinning and weaving plant.

SWEETWATER, TENN. — Building and equipment and all other assets of the American Textile Woolen Co., idle for more than a year, have been purchased by a new corporation headed by Shade Murray of Nashville, Tenn. The sale price was not revealed. Mr. Murray has been manager of the Springfield (Tenn.) Woolen Mills since 1941. The local plant, last of four units originally owned by American Textile Woolen Co., normally employs about 450 persons.

MCKINNEY, TEX. — Officials of Texas Textile Mills, Dallas, whose plant here was severely damaged by a tornado May 3, have reached no decision as to the resumption of operations. Difficulty in getting replacement machinery, some types of which will not be available for more than a year, pose a big problem, officials state.

DALLAS, N. C.—Robinson Mills, Inc., with authorized capital stock of $500,000, has received a certificate of incorporation to deal in textile products. Incorporators are Ralph Robinson, Sr., K. G. Bumgardner and A. D. Withers, all of Gastonia, N. C. This incorporation involves a change from a partnership to a corpartion. The plant, formerly known as Robinson Yarn Mills, employs about 200 workers. There will be no change in its operation.

ELIZABETHTON, TENN.—American Bemberg Corp. reports for the 24 weeks ended June 12, 1948, net sales of $6,313,940 compared with $5,746,866 for the corresponding period of 1947. Net profit after taxes was $596,172, equal to $1.97 per share on the common and common Class B stocks against $763,169 or $2.56 per share for the 1947 period. For the 12 weeks ended June 12, 1948, net sales were $3,174,759 and net profit after taxes $266,572 or 87 cents per common share. The report states that net profit for the first 24 weeks of 1948 was below that of the same period of 1947 notwithstanding that net profit in 1947 was reduced by an estimated $160,000 because of a wildcat strike in the early part of that



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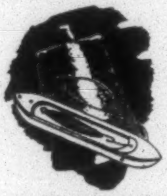

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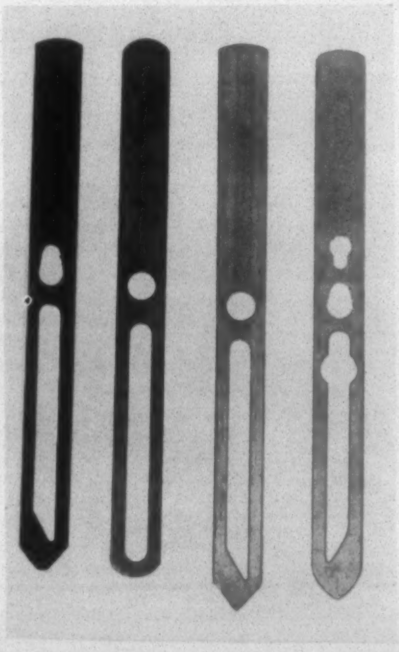

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year. North American Rayon Corp. reports for the 24 weeks ended June 12, 1948, subject to audit and year end adjustments, net sales of $11,614,777 compared with $10,999,065 for the corresponding period of 1947. Net profit after taxes was $1,542,240, equal to $3.01 per share on the Class A and B common stocks outstanding against $1,905,474 or $3.72 per share for the 24 weeks of 1947. For the 12 weeks ended June 12, 1948, net sales amounted to $5,989,021 and net profit was $800,899 or $1.56 per share on the Class A and B common stocks.

McColl, S. C. — Plymouth Mfg. Co.'s $125,000 air conditioned community building was dedicated July 24 with a field day for employees, a barbecue dinner and speeches by Gov. J. Strom Thurmond and Senator Burnet R. Maybank and other dignitaries. Caled Whitaker Hall for John K. Whitaker, president of the firm, the community building has a seating capacity of 2,200 with removable seats so that the auditorium can be used for basketball and other Winter and indoor sports. Other facilities include the latest in motion picture and sound equipment, swanky lounges, snack bar and a library containing over 2,500 books. Adjacent to the community building is Johnson Field, named for G. W. Johnson, vice-president and general manager of Plymouth. The modern athletic plant is complete with lighted baseball diamond, football field, softball diamonds, grandstand and dugouts. Popularity of the new auditorium is indicated by the fact that a crowd of 1,500, from a population of 3,500, attended the first movie. The admittance charge is set merely to pay for the film rental. Children are admitted to Saturday movie matinees and ball games free.

Cramerton, N. C.—Plans have been announced for a $200,000 expansion of the finishing department at the Cramerton plant of Burlington Mills Corp. An additional 8,000 square feet of floor space will be made available in the finishing department and new machinery will be installed.

LaGrange, Ga.—Distribution of about 96 per cent of the assets of Callaway Mills, Inc., unless halted by new court action or an appeal, was provided in a decision handed down July 1 in Bibb Superior Court at Macon. The decision came in the litigation over the reorganization of the company and distribution of assets. The court ordered Callaway Mills to distribute assets amounting to $6,900,000 to 96.23 per cent of the stockholders, and to set aside sufficient funds, estimated at about $271,000, to safeguard the rights of 3.77 per cent of the stockholders who objected to the distribution of the assets.

Boston, Mass.—Officials of Pacific Mills announced recently that net sales for the first six months of 1948 were $56,958,600, against $44,394,400 in the corresponding period of 1947. Estimated net profit, after adding to the reserve for contingencies, was $5,441,500, compared with $3,479,900 in the same period of 1947. In both years $2,000,000 was added to the reserve for contingencies. New profit is equivalent to $6.22 per share on 873,452 shares outstanding, against $3.98 a share in the like period a year ago on the same number of shares. Directors of the firm voted an increased cash dividend of $1 a share and a dividend of five per cent in capital stock, both payable Sept. 15, 1948, to stockholders of record Sept. 1, 1948. Ii lieu of fractional shares, an amount of cash will be paid calculated on the basis of a value of $38 a share.

The new community building at McColl, S. C., called Whitaker Hall for John Whitaker, president of Plymouth Mfg. Co., has a seating capacity of 2,200 with removable seats so that the auditorium can be used for basketball and other indoor sports. It boasts the latest in motion picture and sound equipment, swanky lounges and a streamlined snack bar.

At left is an informal scene at the ultra-modern lunch counter. Here hot, nutritious meals are served to the employees at cost. Each of the three mills will be similarly equipped. At right is a corner of the library installed in the new community building erected for the families of the 700 textile mill employees. Over 2,500 brand new books have been catalogued at the library.

Hogansville, Ga. — Hogansville, home of three major textile plants of the United States Rubber Co., is featured in the July issue of *Us*, official publication of the firm.

Lexington, N. C. — Wennonah Cotton Mills Co. will celebrate its 62nd anniversary Aug. 6 at a dinner-dance for employees and guests. Featured speaker at the event will be J. Melville Broughton, Democratic nominee for the U. S. Senate.

Kings Montain, N. C.—Walmore Mills, terry cloth weaving mill established in this city several months ago, has been offered for sale. The plant has 95 looms with jacquard heads and complementary equipment. W. F. Kincaid, Jr., of Lincolnton, N. C., is handling the sale of the mill, reported owned by Adams Weaving & Spinning Corp. of New York.

Union, S. C.—Union-Buffalo Mills Co., wholly-owned subsidiary of United Merchants & Manufacturers, Inc., with plants in Union and Buffalo, S. C., has been merged with the parent company. Union-Buffalo is now a division of United Merchants rather than a subsidiary.

Mobile, Ala.—London Woolen Mills of Mobile, Ala., Inc., has recently been chartered with an authorized capital stock of $50,000. Officers are James A. Stevens, president and treasurer; Hardy N. Stevens, first vice-president; Mrs. Lazona S. Anderson, second vice-president; and Mrs. Amilia S. Burns, secretary.

Greenville, S. C.—Postponed for almost 15 years, the case of Union Bleachery against the United States of America in which the textile firm sought to recover $204,538.85 allegedly overpaid in taxes in the 1923-28 period, finally was brought to action in Federal Court here July 21. The original complaint was filed Oct. 23, 1933. The court sustained the defendant's motion for a judgment in its favor after government attorneys conceded that Union was due $1,732.95 for overpayment of taxes for three of the years.

Greensboro, N. C. — Burlington Mills Corp. has released a 30-minute full-color movie tracing the company's development over the past quarter century to its present position as one of the world's largest producers of rayon fabrics. Titled, "The Fabric of Our Lives," the movie was made on location at more than a dozen representative company plants in North Carolina, Virginia, Tennessee and Pennsylvania and at the executive offices in Greensboro, N. C., and the sales offices in New York. Designed primarily for showing to the company's 25,000 employees located in 44 communities in six

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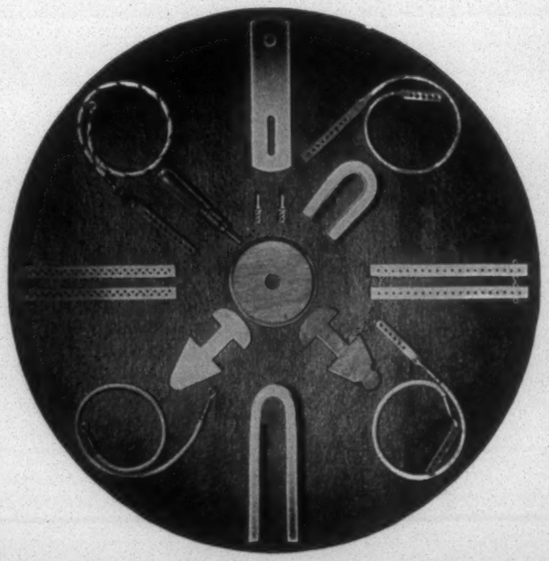

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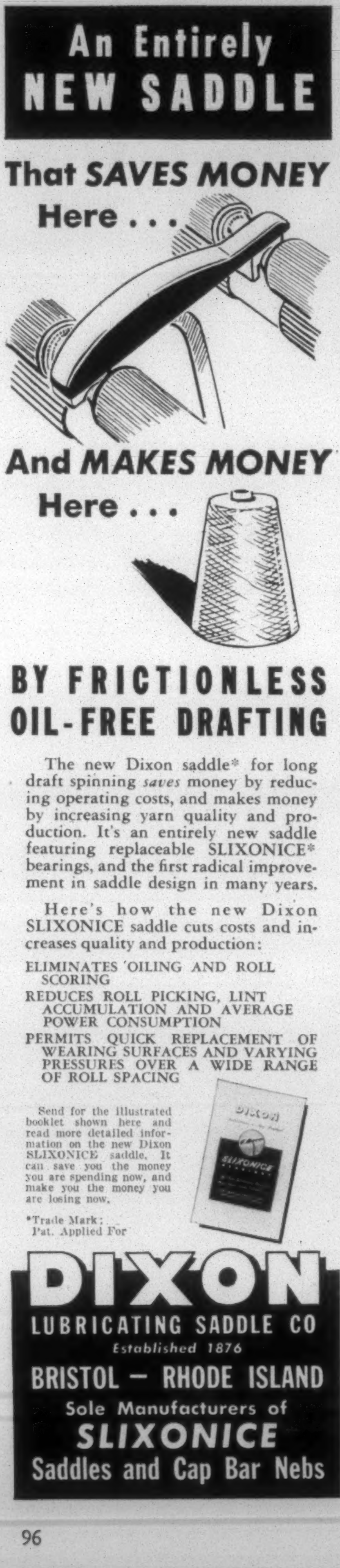
Warehouses at Jersey City, and Textile Warehouse Company, Greenville, S. C.



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That *SAVES MONEY*
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Here . . .

BY FRICTIONLESS
OIL-FREE DRAFTING

The new Dixon saddle* for long draft spinning *saves* money by reducing operating costs, and makes money by increasing yarn quality and production. It's an entirely new saddle featuring replaceable SLIXONICE* bearings, and the first radical improvement in saddle design in many years.

Here's how the new Dixon SLIXONICE saddle cuts costs and increases quality and production:

- ELIMINATES OILING AND ROLL SCORING
- REDUCES ROLL PICKING, LINT ACCUMULATION AND AVERAGE POWER CONSUMPTION
- PERMITS QUICK REPLACEMENT OF WEARING SURFACES AND VARYING PRESSURES OVER A WIDE RANGE OF ROLL SPACING

Send for the illustrated booklet shown here and read more detailed information on the new Dixon SLIXONICE saddle. It can save you the money you are spending now, and make you the money you are losing now.

*Trade Mark;
Pat. Applied For

DIXON
LUBRICATING SADDLE CO
Established 1876
BRISTOL — RHODE ISLAND
Sole Manufacturers of
SLIXONICE
Saddles and Cap Bar Nebs

states, the film will also be made available on request to other community groups. The movie covers all company operations and portrays manufacturing sequences and end product uses as well as varied activities that take place in the company's ten manufacturing divisions and 77 plants.

New York City—Consolidated Textile Co., Inc., which operates plants at Lynchburg, Va., and Shelby, N. C., declared a stock dividend of ten per cent to holders of July 9. Officials stated that no fractional shares will be issued; instead, the company will pay $1.20 for each one-tenth of a share which stockholders otherwise will be entitled to receive. The regular quarterly cash dividend of 40 cents, declared on June 16, was paid July 9.

Birmingham, Ala.—Service pins denoting ten years service, or more, were awarded July 1 to 105 employees of Avondale Mills at ceremonies here. Among those receiving awards was Donald Comer, chairman of the board, who received a pin for 25 years' service.

Rockingham, N. C.—Ledbetter Mfg. Co., defendant in a $37,000 damage suit, plans an appeal to the North Carolina Supreme Court because Judge George A. Shuford failed to order a non-suit June 21 in Richmond Superior Court. Judge Shuford ordered a mistrial in the case in which McLaurin's, Inc., and the Rockingham Ice Co. is seeking $37,000 in damages for alleged flood damage caused when the Ledbetter dam broke on Sept. 17, 1945. The mistrial was ordered after a jury, deliberating more than two hours, failed to break a deadlock in which the defendant was favored by ten jurors to two.

Rockingham, N. C.—A decision handed down last month at Greensboro, N. C., ordered Charles H. Robertson, North Carolina Collector of Internal Revenue to refund an alleged overpayment of $22,257.27 in excess profits and other taxes to Steele's Mills, Rockingham, and Wachovia Bank & Trust Co., Winston-Salem, trustee. Steele's Mills was acquired sometime ago by Burlington Mills Corp. and is now operated as a Burlington unit.

Talledega, Ala.—Stretch-Tex Co., Inc., organized about a year ago, is now in full production of elastic yarns after converting a surplus government powder plant building into a modern industrial plant. Officers of the firm are L. H. Roberts, president; Irving Stark, vice-president; Lucian Lentz, secretary; J. G. H. Morris, treasurer; and H. D. Reeves, comptroller.

Anderson, S. C.—Construction projects at Anderson textile plants, completed or underway, follow: Construction of an addition to the card room at Equinox Mill is nearing completion. The new section is 35 feet wide and 200 feet long and adjoins the mill's present carding department. It will provide room for another row of carding machines. . . . Orr Cotton Mills recently added an underground story to make room for about 100 additional looms and the office also was remodeled. . . . At Wellington Mills, Inc., a similar underground story of 60,000 square feet was built and a brick gymnasium has been finished.

Icard, N. C.—Fiske-Carter Construction Co. of Greenville, S. C., has been awarded the contract for construction of a braider building and office building for Icard Cordage Mfg. Co.

Newberry, S. C. — Newberry Textile Mills, now undergoing an extensive rehabilitation and modernization program, is to shift from the production of sheeting to fine quality print cloths. The mill has spent about $1,200,000 on the program to date. The mill was to close July 19, for a period of four weeks, during which time modernization work, installation of other looms and changes that could not be made while the mill was in operation, was to be carried out.

Middleway, W. Va.—Varel Mills, Inc., a subsidiary of Virginia Woolen Co., Winchester, Va., is scheduled to begin operations by the first of the year, serving as a finishing plant for the Winchester firm. Approximately 100 persons are to be employed.

Gibsonville, N. C. — The Gem Mills plant of Burlington Mills Corp., bought by Burlington during the war and used for warehouse and storage space, has been sold to M. B. Smith of Burlington, N. C., vice-president of Liberty Hosiery Mills, Inc.

Kingston, Ga. — Kontz Mfg. Co. of Rome, Ga., has acquired a spinning mill here which will produce yarn to be used in the manufacture of fringes made on Cidega knitting looms. Plans are to move the firm's office to Kingston, it is reported. Additional machinery has been purchased and is being installed in the new plant.

Greenwood, S. C.—Plans for construction of a filament rayon weaving plant near this city were announced July 18 by James C. Self, president of Greenwood Cotton Mill. The new plant will cost an estimated three or four million dollars and is expected to give employment to more than 1,000 persons.

Reddell, La.—Plans of Evangeline Textile Mills, Inc., a new corporation, to purchase the Fort Worth (Tex.) Cotton Mills and move facilities to Reddell for establishment of a 25,000-spindle mill, were abandoned temporarily when Evangeline Parish backers failed to raise their quota of stock subscriptions.

Hillsboro, N. C.—Climaxing a two-year program of modernization and expansion during which about $500,000 has been spent on improvements which have increased production 70 per cent with elimination of third shift operation and improvement in working conditions and quality of product, Belle-Vue Mfg. Co. last month awarded service pins to 225 long-term employees at a community meeting and banquet. Belle-Vue is a unit of Hesslein & Co., Inc., who purchased the mill about three years ago. Presentation of the service pins were made by L. E. Beard, president and treasurer of Belle-Vue, and John K. Whitaker, president of Hesslein & Co., Inc.

New York, N. Y.—Directors of American Viscose Corp., at their regular quarterly meeting, declared dividends of $1.25 per share on the five per cent cumulative preferred stock and 50 cents per share on the common stock, both payable Aug. 2, 1948, to stockholders of record at the close of business on July 19, 1948.

GREENSBORO, N. C.—Vacation payments amounting to $1,180,000 were made to employees of Burlington Mills Corp. when units of the firm closed for vacation early in July. The company operates 55 plants in North Carolina, Virginia and Tennessee.

NEW YORK, N. Y.—A half-century of progress is chronicled in a handsome cloth-bound book, *These Fifty Years*, recently issued by The Duplan Corp. The book tells the story of the progress of the company during the period and presents today's position with page photographs of many of the operations in each of the plants.

CLEVELAND, O.—Industrial Rayon Corp. reports net earnings for the six months ended June 30, 1948, of $5,825,929, equal to $3.84 per share of common stock. This compares with $4.02 per share for the first half of 1947. Earnings for the first half of 1947 included 72 cents per share obtained from the sale of patents whereas earnings for the first half of 1948 included less than one cent per share from this source. Second quarter 1948 earnings amounted to $1.92 per share, exclusive of income from the sale of patents. Comparable earnings for the second quarter of 1947 were $1.70 per share. In the first quarter of 1948 earnings were $1.91 per share.

JACKSONVILLE, ALA. — Profile Cotton Mills has constructed a large recreation center for employees and their families. In addition to facilities for all types of games, a swimming pool is included also. A clinic, beauty shop, soda shop and lunch room will be installed soon.

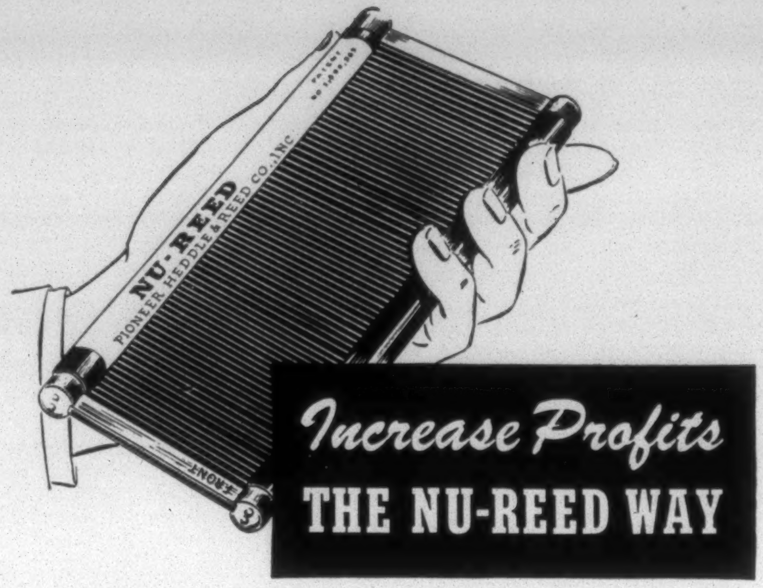
ANNISTON, ALA. — A new boiler room with a 150-foot brick smoke stack is nearing completion at Anniston Mfg. Co. Work also is progressing on the new three-story brick and steel addition to the mill. Four 240-spindle Saco-Lowell spinning frames have been installed at the plant since Jan. 1.

MONROEVILLE, ALA.—Monroe Mills recently completed installation of a sound system with 43 loud speakers for "piping" music to employees at work.

LINCOLNTON, N. C.—Receivership of G. L. Turner Mills, manufacturer of cotton yarns, has been dissolved in Lincoln County Superior Court on consent of plaintiffs, Agnes McFlynn and Bertha Frey of Charlotte, N. C. Plaintiffs and the defendant, G. L. Turner Mills, have acquired a stand-by agreement from secured and unsecured creditors, according to court records.

GOLDVILLE, S. C.—Joanna Cotton Mills Co. has erected a new post office building here and the Post Office Department has approved changing the name of the Goldville Post Office to Joanna, effective Aug. 1. Change in the name was requested on petition of a large percentage of the residents of the community that centers about Joanna Cotton Mills Co.

ST. LOUIS, MO.—Group health and accident insurance for hourly rated employees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of Bemis Bro. Bag Co. is now in effect at all Bemis plants. Employee participation in this insurance plan is averaging more than 95 per cent of those eligible and three Bemis plants have reported 100 per cent participation. Bemis operates cotton mills at Bemis, Tenn., Bemiston, Ala., Indianapolis and Cannelton, Ind.

MARBLE FALLS, TEX.—The Ace Woolen Co. of Manchester, Conn., several weeks ago began the removal of its plant to this city and is expected to be in operation here probably in September. A ten-year contract between Ace Woolen Co. and the City of Marble Falls, owner of the building occupied by the plant, calls for the employment of a minimum of 75 persons.

GREENVILLE, S. C.—J. P. Stevens & Co. has set up a complete pilot plant and testing laboratory in a warehouse near the Victor-Monaghan plant here, to be used for machinery research. R. A. Fields, formerly a Pacific Mills superintendent, is head of the pilot plant.

MARTINSVILLE, VA. — The local nylon plant of E. I. du Pont de Nemours & Co., Inc., has won the company directors' safety award for the eighth consecutive time, according to an announcement by W. D. Hertford, manager. The plant has been operated continuously for 2,175 days, or almost six years, without a lost-time injury; in that period it has accumulated 15,260,000 exposure hours. The award places the Martinsville plant at the top of the list of 124 Du Pont operations. Each employee will receive a suitable award to be selected from various articles of merchandise.

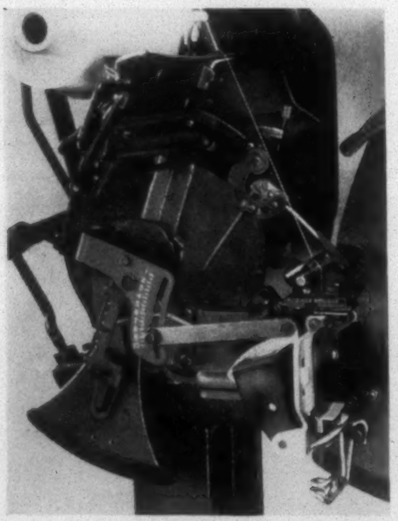
SPRAY, N. C.—Fieldcrest Mills has inaugurated a free eye-testing service for its employees. An instrument, known as the Keystone Telebinocular, is used in measuring visual performance of the workers. It detects evidence of defects in vision that might lead to eye strain or other conditions.

For The Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Magnetension Is Designed For Winding Of Synthetics

Universal Winding Co. has developed a new pinch type tension device for winding normal twist synthetic yarns. This device is called the Magnetension because of its fundamental use of magnetism to provide the degree of tension applied when winding yarn. This tension is easily attached to the Universal No. 50 winding machine in the location of the present tension.



The principle by which tension is applied to the yarn is a loosely mounted magnetically attracted tension leaf pressed against a non-magnetic wear plate by the attraction of a small permanent magnet placed on the back side of the wear plate. The initial tension settings are readily provided by movement of the permanent magnet toward and away from the wear plate. Finishing tensions are determined by the settings of the lever attached to the traverse frame counterweight.

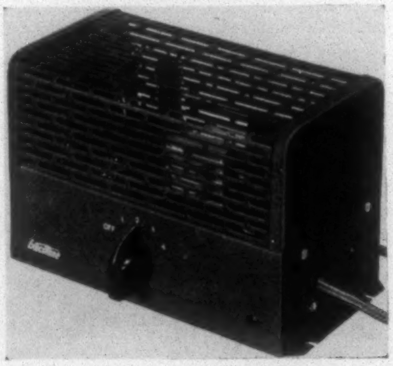
Some of the advantages of the Magnetension are summarized as follows: (1) the non-multiplying characteristics of this straight thread line pinch type tension result in fewer shiners and broken filaments, and lower end breakage, increasing the amount of yarn run off from the cake delivery; (2) smoothness and evenness of tension is achieved through the use of the low inertia, loosely mounted, magnetically attracted, tension leaf; (3) untensionized yarn resulting from plucks in the supply causing cut ends and loops at the cones are eliminated since the yarn is constantly controlled. A very general acceptance of this tension is anticipated and Universal will shortly be in a position to supply these tensions in unlimited quantities.

Westvaco Chemical Merged With Food Machinery Corp.

The boards of directors and managements of Food Machinery Corp. and Westvaco Chemical Corp. have reached an agreement for the merger of these two companies. Food Machinery Corp., as the surviving company, will change its name to Food Machinery and Chemical Corp. The business of Westvaco will be operated under the direction of its present management as the Westvaco Chemical Division of the company and Westvaco's interest will be represented on the board of directors.

Intercom Amplifier Solves High Noise Level Problems

To increase the power volume needed for adequate coverage of large or noisy areas, Executone, Inc., has announced a new inexpensive booster amplifier for use with its intercom and sound system. Offering a practical and economical answer to many heretofore unsolved acoustic problems, this new compact Model P-29 booster amplifier provides increased paging volume on systems designed to call or page all stations simultaneously. When used with an existing sound or intercom system, audibility of staff stations and reproducers located in large and noisy departments, is substantially increased. When coupled with a standard Executone reply station, this booster solves for the first time the problem of providing audible two-way intercommunication in very noisy locations, such as machine shops, press rooms, factory areas, etc.



Operating on 110-120 volts, A. C. or D. C. current, the Model P-29 amplifier yields an output of eight watts and consumes a maximum of 53 watts of electric current. Housed in a brown crackle finished metal cabinet of sturdy construction, it is 5¼ inches high, 4½ inches deep, 8 3/16 inches long. A combination four-step volume control and on-off switch regulates volume to the desired level. It is manufactured by Executone, Inc., 415 Lexington Avenue, New Nork 17, N. Y.

Foxboro Co. Instrument Courses Now In 13th Year

The Foxboro (Mass.) Co., which has conducted training courses in the theory, application, operation and maintenance of industrial instruments since early in 1935, has announced its schedule for the remainder of 1948. There will be four courses, each of two weeks' duration, in the months of August, October, November and December. Courses will also be arranged for companies wishing to send a group sufficiently large to warrant a special class for the study of particular instruments and applications. Special courses will also be arranged for specific industry groups. The training

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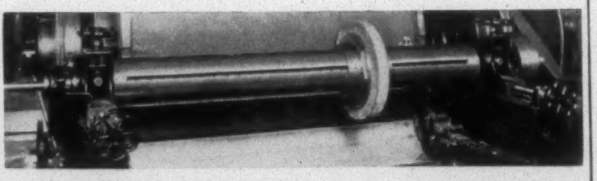
Roy Heavy Duty Bare Cylinder Grinder



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Grob To Be Represented By Watson & Desmond

Grob & Co., Switzerland, has appointed Watson & Desmond, Charlotte, N. C., its Southern representative for heddles, heddle frames, and stop motions. The Grob frames have aluminum top and bottom shafts, which prevent warping or bowing; continuous sliding devices; and sliding outside hooks or eyes that can be placed in any position. The heddles are precision made with extremely smooth warp eyes.

Ultra Chemical Offers Surface Active Agent

A new synthetic surface active agent, said to be 224 per cent stronger than conventional types, is being marketed to industry under the name Sulframin AB Concentrate by Ultra Chemical Works, Paterson, N. J. This material is a very highly concentrated dodecyl toluene in small flake form. The new detergent is recommended for textile processing. Sulframin AB, the result of long experimentation and research in the Ultra Chemical Works laboratories, features high concentration, resistance to acids and alkalis and excellent detergency, especially at higher temperatures. The new detergent performs several important functions, among which are cleanser, dyeing assistant, wetting agent, penetrant, etc.

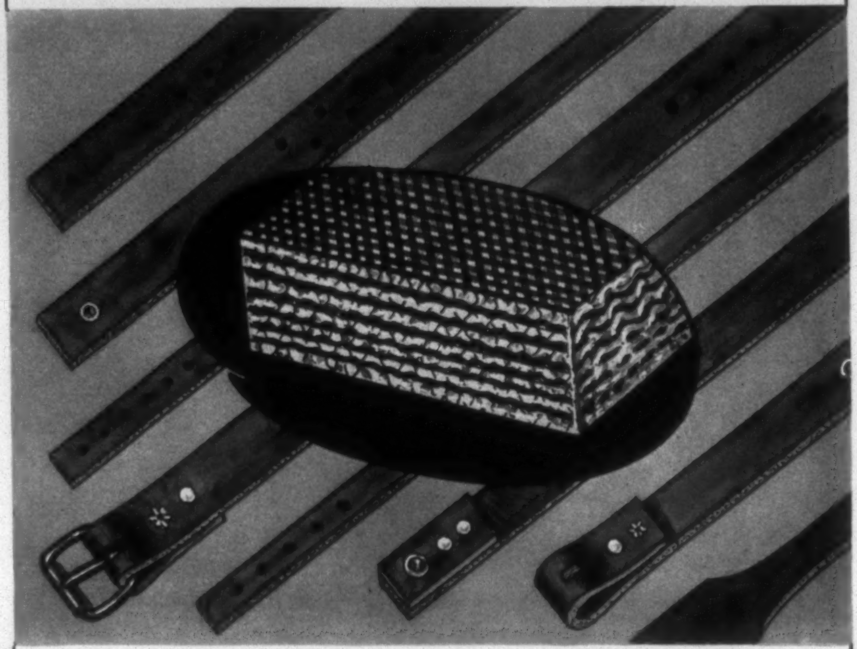
General Electric Silicone Products Are Described

A 30-page illustrated bulletin (No. CDR-57) describing in detail G-E silicone products has been issued by the General Electric Co. Resin and Insulation Materials Division. The bulletin describes the new G-E silicone resins, oils, greases, water repellents, and rubber together with their many industrial uses. Charts and tables are included for handy reference. Copies may be had by writing General Electric Co., Chemical Department, Pittsfield, Mass.

A. V. C. Now Using Paper Cover For Rayon Cakes

A non-returnable paper cover has been adopted by American Viscose Corp. for use on rayon yarn sold in cake form. This new cover eliminates the five-cent deposit, with all the associated handling and bookkeeping which was required with the returnable knitted covers, standard heretofore. The problem, which for a long time seemed in-

Compare



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surmountable, was to make an inexpensive cover with excellent permeability and high wet strength, so that the yarn could be soaked for throwing, or dyed, then extracted and dried, in cake form with the protective cover still intact. The new paper cover is the result of a long series of tests and trial runs, extending over a period of seven years. During the experiments covers were made and tried out in various shapes and materials, from kraft paper to the finest tissue. Several types worked on a small scale, but would not stand up under volume handling. The one that finally did was a simple tube, made with a lapped seam, of a paper specially developed for strength and permeability, made to Avisco's specifications.

Mills report that the new cover is not only more convenient because of the non-returnable feature, but that it is more efficient. The special paper is actually far more permeable than the knitted cover. Weighing less, it also absorbs far less sizing and dye, making for greater economy. Experience has also indicated in some cases that in the paper cover yarn is less likely to shift in transit because there is less friction between yarn and cover. This means less waste and greater efficiency in winding and throwing. The paper cover is expected to give added impetus to the sale of rayon yarn in cakes, the form in which it comes from the spinning pots. More than a quarter of Avisco's yarn production is now sold in this package. Cakes cost less than other packages, such as cones, skeins, and beams, because rewinding is eliminated at the rayon plant. They also provide the mills with a cleaner yarn, since cakes receive a minimum of handling. Avisco's Roanoke, Va., plant has been shipping all of its rayon cake production in the new covers for some time. All of the Parkersburg, W. Va., production sold in cake form is expected to be shipped in paper covers by early in the Fall. The other two plants shipping yarn in cakes, at Lewistown and Marcus Hook, Pa., will change over as soon thereafter as is deemed practicable.

Four New Scotch Textile Tapes Are Made Available

Four new Scotch brand tapes designed to meet the special requirements of the textile trade were announced July 15 by the producer, Minnesota Mining and Mfg. Co., St. Paul, Minn. All four tapes have pressure-sensitive adhesive, enabling them to grip tightly immediately upon contact, the producer said. They are: Scotch textile tapes 280 and 925, for holding the ends of warp threads during warping and slashing operations, and for sealing holes in Jacquard pattern cards when modification of the cards is necessary; Tape 916 for sealing outer wraps of warps to protect against damage in shipment and for holding the final lap of a roll of cloth to prevent unwinding during the subsequent handling; and No. 400 double-coated tape, for holding yarn ends on creel, for adhering fur or felt in shuttle, and for starting the wind of cloth on Simpson shells. No. 400 has pressure-sensitive

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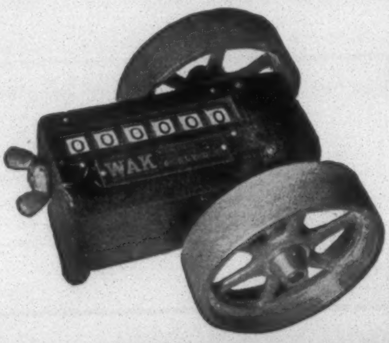

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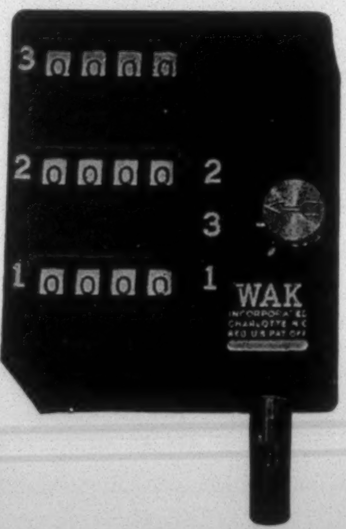
Folding Machine Counters
Special Counters



★

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CHARLOTTE, N. C.

adhesive on both sides. Also offered were standard Scotch colored cellulose tapes for identifying roving or sliver cans. Both the special textile tapes and the standard taps are immediately available throughout the trade, it was announced.

Foot Control Featured In Inspecting Machine

A new measuring and inspecting machine featuring foot control for variable speeds is now being produced by Cutting Room Appliances Corp., New York City. The foot control is exclusive with the new machine and permits the operator to speed up the unrolling action by the mere pressure of his foot from any part of the machine. The foot control consists of a pedal across the entire width of the machine and is worked somewhat like the accelerator on an automobile. The operator "steps on the gas" to increase the speed of the machine, and lets up when he decreases speed. This leaves his hands free to adjust or handle the materials as it is unrolled.

For inspecting purposes, the machine unrolls the goods at a slow speed, so that the operator can check for damages and stop the machine instantly to mark imperfections. A simplified forward and reverse drive on a single hand control unit gives him fingertip control. An examining board is supplied so that the operator can scan the materials easily; and a yardage meter which counts off yardage by one eighths is situated for ready reading. The new machine will take up about nine inches less floor space than is required by other machines, due to a rearrangement of the mechanism which has been made more compact. It can handle all types of fabrics, heavy or light, whether on rolls or folds, and is constructed in standard widths of 48 and 60 inches, to take all widths of material up to the maximum. The machine can be attached to any electrical outlet for immediate operation.

Management Association Offers Eight Booklets

The American Management Association, 330 West 42nd Street, New York City, has published and offered for sale to industry eight booklets concerned with production, office management and personnel: Production Series No. 172, "Planning and Administering Effective Incentives;" Production Series No. 174, "How to Develop Competent Supervision;" Production Series No. 175, "Labor-Management Co-operation for Increased Productivity;" Office Management Series No. 119, "New Horizons in Office Management;" Office Management Series No. 121, "Incentives and Standards in Office Production;" Personnel Series No. 114, Plant-Wide and Geographical Salary Administration;" Personnel Series No. 118, "Trends in Employee Health and Pension Plans;" and Personnel Series No. 119, "Planning Wage and Extra Compensation Policies."

New Machine Available For Marking Selvages

A new machine for marking trademarks, names, stripes, etc., on the selvage of tex-

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DESIGNED TO FIT the needs of the industry, this textile roving truck has a variety of uses in any plant. Sturdy and rigidly reinforced for hard daily usage and long service . . . *there just isn't anything better.*

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tiles has been developed by Adolph Gottscho, Inc., New York City manufacturer of industrial coding and marking equipment. Known as Rolacoder 900, the new machine is similar to other Rolacoder models in that it is intended to replace manual and other costly marking methods. However, this new model is designed specifically for imprinting continuous rolls or webs of textiles and other sheet materials automatically as part of a winding or un-winding operation. Also, the Rolacoder 900 features an entirely new ink control system that permits the use of quick-drying and pigmented inks, which are necessary for imprinting light colors on dark fabrics. The Rolacoder 900 is made in several sizes. The machine can be mounted by the user's own personnel without altering the equipment to which it is attached. Constructed of precision parts, sealed bearings and tough alloy castings, the machine is designed for long and trouble-free operation. Further information may be had by writing to Adolph Gottscho, Inc., 1 Hudson St., New York 13, N. Y.

Wilkin & Matthews Open Sales Agency In Charlotte

Wilkin & Matthews is the name of a new manufacturers' agency organized at Charlotte, N. C., to handle textile specialties and materials handling equipment. Principals of the firm are Hugh Wilkin and J. T. Matthews, both of whom have had wide experience in selling to the textile industry. Included among the companies the agency will represent in this territory are: Sun-Ray Co., manufacturer of textile mill trucks; Faultless Caster Co., Bassick Co., Colson Co., King Chemical Co., and Carolina Brush Co. Offices are located at 1504 East Worthington Avenue.

Willow Island Plant Of Calco In Full Operation

Calco Chemical Division of the American Cyanamid Co. announces that the third production unit at the new plant at Willow Island, W. Va., has been completed and is now in operation. The new manufacturing unit produces melamine, which has remained a laboratory curiosity since its discovery in 1834. It had defied attempts of chemists and engineers to produce it in commercial quantities at reasonable costs. Cyanamid's fundamental research on nitrogen compounds and its extensive engineering facilities combined to solve this difficult problem, and in 1939 the first carload of melamine was produced in a Cyanamid plant. Since that time melamine derivatives have served many industries, including the textile industry. Derivatives from melamine produced at Willow Island are marketed under such trade names as Melmac, Laminac, and many others.

Lanaset is used in the treatment of woolen fabrics to control shrinkage. Lanaset-treated wool dresses, suits, sport shirts and blankets can be washed under ordinary con-

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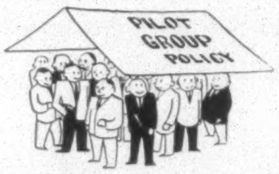

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ditions without fear of harmful shrinkage, loss of shape or texture. Other derivatives of melamine are used to prevent fabrics from wrinkling, for the treatment of chintz to prevent fading, sagging, loss of gloss or fuzzing, to render paper impervious to water, and numerous other uses. The new melamine plant, which is now in production, is of the most modern construction. It is equipped with machinery especially designed for efficiency and service. In addition to the new manufacturing units, the power house is now in active operation, replacing the temporary plant which was used to furnish steam during construction.

Booklet Tells Rayon Use In Tire Development

A new 20-page illustrated booklet, telling a comprehensive story of tire development and how rayon is being made and used to improve tire quality, has just been published by Industrial Rayon Corp. under the title, *Rayon Cord Opens the Door to a New Era in Tires.*

Highlights in the history of tire development from carriage days to the present are recorded by way of introduction to a detailed presentation of the rayon story. Animated cartoon studies, production photos and a comprehensive flow chart tracing all the steps in the integrated manufacture of rayon cord fabric by Industrial Rayon Corp.'s continuous process, answer virtually all the questions that a tire dealer or motorist could ask about rayon cord tires.

Copies can be obtained by writing Industrial Rayon Corp., Cleveland 1, Ohio.

Chemicals Manufacturer Develops Liquid Desizer

Rohm & Haas Co. announces a new liquid diastatic enzyme concentrate for textile desizing. According to the manufacturer, this new product, named Rhozyme LA, combines the recognized economy of a liquid enzyme with unusual stability at high temperatures, affording thorough and uniform desizing in the fastest possible time. Rhozyme LA is the latest addition to the series of textile desizing agents supplied by Rohm & Haas Co. under the name Rhozyme. The others are dry, stable powders, the most widely used being Rhozyme DX, a concentrated diastatic enzyme powder, and Rhozyme PF, a concentrated proteolytic enzyme powder. Said W. J. Thackston, Jr., manager of the company's textile chemicals department, "The introduction of Rhozyme LA now offers textile processors the opportunity of utilizing the efficiency of high-speed, continuous desizing with maximum economy. Such a move will eventually eliminate one of the last processes remaining in cotton and rayon finishing plants today, as more and more plants become equipped to desize as a continuous operation."

New Fork Lift Truck Operator's Guide Offered

The Towmotor Corp., manufacturer of fork lift trucks, tractors and fork lift truck accessories, announces the publication of a new and revised edition of the *Fork Lift Truck Operator's Guide,* copies of which

Beater Lags
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We deliver beater lags to you, already bored and counter-sunk to fit your picker. All you have to do is to put them in place. Or, if you prefer, we furnish them without holes.

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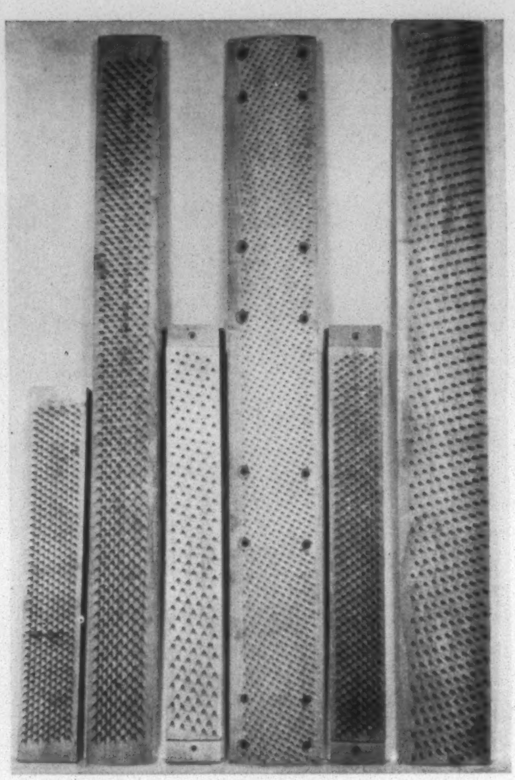

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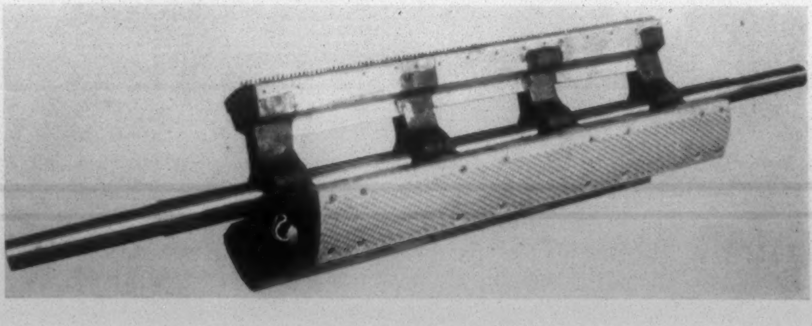

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SIZING problems, many weavers know by long experience, are most readily solved with a call to the Frank G. North organization of men who are at home in the mills.

For almost half a century our products and our staff of experienced mill-trained representatives have contributed to profitable, efficient textile production.

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FOR THE TEXTILE INDUSTRY'S USE—

are available upon request. The guide, which was in great demand when originally published some years ago, has been brought up-to-date, incorporating useful operating hints and instructions in line with the most modern, approved handling techniques. In addition to providing clear, concise instructions for the safe, efficient operation of a fork lift truck, the guide includes sections on standard fork lift trucks accessories and their operation, valuable suggestions for handling materials and containers of all types and a complete section on load-handling techniques. Even the most experienced fork lift truck operator will find much valuable material in the new *Operator's Guide,* while those companies who have recently adopted fork lift trucks to their handling operations will find it invaluable for proper instruction of employees, insuring maximum efficiency and safety in operation, and an aid in securing the full benefits of fork lift truck operations. Requests for copies of *Fork Lift Truck Operator's Guide* may be addressed to Towmotor Corp., 1226 East 152nd Street, Cleveland 10, Ohio.

Allis-Chalmers Booklet Has Motor Information

Information on Allis-Chalmers general purpose motors suitable for every industry is contained in a new *Handy Guide for Quick Selection of Electric Motors* released by the company. The new 12-page bulletin provides detailed specifications covering squirrel-cage induction motors and application data, range of sizes and speed torque curves on synchronous, wound and direct current motors. It covers applications and features of gearmotors and multi-speed induction motors and carries an induction motor selection chart for units from one to 200 horsepower. Attention is also called to Allis-Chalmers complete line of motor controls for every requirement of motor operation. Charts list the range of each type of control in voltage and horsepower, together with either the N. E. M. A. size or the Allis-Chalmers type number. Copies of Bulletin 51B6052J are available upon request from Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.

Explorer Joins Staff Of U. S. Testing Co.

Comdr. Finn Ronne, the Antarctic explorer, who recently returned from a 15 months' expedition to the continent surrounding the South Pole, has joined the scientific staff of the United States Testing Co., Inc., Hoboken, N. J., to formulate plans for establishing the first climatological research laboratory in America. This research activity will have as its objective all phases of life in the frozen wastes of both the Arctic and Antarctic ranging from food, clothing, transportation and health to the utilization of snow and ice as materials for building landing fields.

The United States Testing Co. envisions the creation of facilities for determining the physical properties of snow and ice as they pertain to industries, transportation and agriculture, such as tensile and compressive strength, triaxial shear, densities, hardness, causes and effects of creep factors, elasticity and plastic characteristics.

"Studies of clothing to determine suitability for diverse seasonal use can be of great value to the textile industry," said Commander Ronne. "U. S. Testing Co. has already established facilities for testing warmth and coolness of fabrics; their water repellancy and flame resistance fit ideally into research such as I would like to undertake. Our months of living near Marguerite Bay, on the Palmer Peninsula, completely frozen in during the long Antarctic night, taught us many things about clothing which gives us a head start on any research program."

Calco Bulletin 802 Deals With Vat Dyes

"Application and Properties of Vat Dyes" is the title of Calco Technical Bulletin No. 802 recently offered to the trade by the Calco Chemical Division of American Cyanamid Co., Bound Brook, N. J. The bulletin gives detailed information about the Calco line of vat dyes which are sold under the trade names of Calcosol and Calcoloid. The fundamental principles underlying the reduction and dyeing of Calcosol and Calcoloid dyes are described and there is briefly outlined the various methods used for their practical application to textiles in the form of stock, yarn and cloth. Fastness properties of the dyes are tabulated in the bulletin.

New Opening Roll Unit Offered By Birch Bros.

Birch Brothers, Inc., Somerville, Mass., have recently placed on the market a newly designed adjustable spiral opening roll unit. The unit is designed to remove wrinkles and doubled selvages from all types of fabric as the fabrics are being processing in the open width. Some of the applications are on padders, mangles, mercerizing ranges, open-width dyeing machines, printing machines, etc. The rolls are made of stainless steel with cut threads, the stay rods are also of stainless steel. The machine is designed so that any degree of contact of the rolls with the cloth may be obtained. It is fitted with cut gears, one of each pair being of fibre for quiet operation. The bearings for the spiral rolls are the self-sealed ball type. Further information on the new unit may be obtained by writing the company.

Slixonice, New Bearing, Introduced By Dixon Co.

Dixon Lubricating Saddle Co., Bristol, R. I., has issued a folder to the industry describing its new product, Slixonice bearings. According to the Dixon folder the new item eliminates all oiling, reduces spinning cost, increases drafting flexibility, reduces yarn soiling, eliminates scored rolls, reduces lint on drafting assembly, practically eliminates roll picking and reduces average power consumption.

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FABCO LOOM STRAPPING — Designed for long life, minimum stretch and greater flexibility. Specially constructed of layers of cotton duck impregnated with rubber in thicknesses as required. In finished strapping or roll lengths.

FABREEKA ENDLESS LICKER-IN-BELTS — No stretch. No slip. Uniform operation plus long life insure continuous, more efficient production.

FABREEKA PADS FOR MOUNTING LOOMS AND OTHER MACHINERY — Absorb impact shock and vibration. Reduce building and machinery maintenance. Scientifically constructed of specially woven cotton duck impregnated with rubber. By using Fabreeka cement lag screws or bolts can be eliminated.

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→ STRONGER YARNS
Superior lubrication.
Less fibre breakage.

→ SMOOTHER YARNS
Retain moisture control longer.
Aids artificial control.
Improve spinning.

→ BETTER LUBRICATION
More even distribution.
Thorough penetration.

→ FREE SCOURING
Decreased oxidation.
Less alkali increases tensile strength.

Specify BRETON OILS FOR WOOL

BORNE SCRYMSER COMPANY
ESTABLISHED 1874
ELIZABETH, N. J. CHARLOTTE, N. C.

NEW ENGLAND REPRESENTATIVES
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W. M. DYNES, West Springfield, Mass.
S. T. DOUGLAS, JR., Westwood, Mass.

SOUTHERN REPRESENTATIVES
JOHN FERGUSON, LaGrange, Ga.
W. E. SMITH, Charlotte, N. C.

Pictured above are the members of the first class of graduate students at the Institute of Textile Technology, Charlottesville, Va. Having successfully completed the first year of academic work, these students will be employed by member mills during the Summer months. Further study at the Institute of Textile Technology will lead to the M. S. and Ph. D. degrees. The institute selects for graduate study no more than 15 new students each year. Front row, left to right: Walter M. Staub, Ontario, Canada; Arthur F. Cacella, New Bedford, Mass.; William H. Martin, Peoria, Ill.; Laconla H. Hance, Lancaster, S. C.; Roger W. Cross, Jr., Manassas, Va. Second row, left to right: William E. Broadwell, Sumter, S. C.; James G. Hilton, Baltimore, Md.; Warren T. Milloway, Greensboro, N. C.; Bernard J. Bornong, Gilbertville, Iowa; Laurence T. Cleary, Andover, Mass.; Richard G. Quynn, Newport News, Va.; Walter T. Meinert, Davenport, Iowa; William F. Gerrow, Jr., Woodberry Heights, N. J.; Robert T. Hite, Lowesville, Va.; and Dean George H. Coleman.

June Rayon Shipments Are Reported

Shipments of rayon yarn and staple in June totaled 90,700,000 pounds, an increase of 27 per cent over the corresponding month last year, according to the July *Rayon Organon,* statistical bulletin of the Textile Economics Bureau, Inc. Domestic deliveries for the first six months of the year amounted to 535,400,000 pounds, 18 per cent greater than deliveries in the same period last year.

Filament yarn shipments in June aggregated 68,300,000 pounds, one per cent less than the previous month, but 25 per cent over those in June of 1947. By yarn types, 45,000,000 pounds were viscose+cupra and 23,300,000 pounds acetate. Yarn shipments in the first six months of the year were up 14 per cent from a year ago with viscose+cupra up six per cent and acetate yarn deliveries up 35 per cent.

Rayon staple plus tow shipments in June totaled 22,400,000 pounds, two per cent over the May level and 36 per cent above June, 1947. Of this total, 15,200,000 pounds were viscose and 7,200,000 pounds acetate. Six months figures for staple and tow show a rise of 34 per cent over the corresponding period last year.

Filament yarn stocks held by producers at the end of June

Industrial Engineers
SPECIALIZING IN TEXTILES FOR OVER ONE-THIRD OF A CENTURY
PAY ROLL CONTROLS SPECIAL REPORTS
WORK LOAD STUDIES COST SYSTEMS
COST REDUCTION SURVEYS
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GREENVILLE, S. C. FALL RIVER, MASS.

totaled 9,500,000 pounds, of which 6,700,000 pounds were viscose+cupra and 2,800,000 acetate. Rayon staple and tow stocks in producers' hands at the end of the month amounted to 4,200,000 pounds.

The *Organon* points out that lower tariff rates and the continued strength of the domestic market have been factors in bringing to the United States a supplemental supply of filament yarn from abroad. During the first four months of the year, foreign producers shipped a total of 4,076,000 pounds, more than in any similar period since 1929. Italy was by far the greatest exporter to the United States with a total of 1,960,000 pounds. Germany came next with 801,000 pounds followed by France with 357,000 pounds, the Netherlands with 293,000 pounds, United Kingdom with 243,000 pounds and Switzerland with 206,000 pounds. Shipments from Spain totaled 109,000 pounds. The line-up of filament yarn shippers to the United States corresponds closely to that in 1929. In that year, Germany ranked first followed by Italy, France and Holland.

Rayon staple shipments also continued in good volume in the first four months of the year. A total of 13,018,000 pounds were shipped to this country for consumption, as against 18,673,000 pounds in the corresponding period in 1947. As compared with the January-April period last year, imports this year were concentrated among fewer suppliers and four countries, namely, Belgium, Holland, France and the United Kingdom supplied over 90 per cent.

Staple imports from Belgium amounted to 3,609,000 pounds in the first four months of the year; Holland 3,070,000 pounds; France 2,989,000 pounds; and United Kingdom 2,125,000 pounds. It is interesting to note, according to the *Organon*, that the United Kingdom has improved its position in 1948, while Sweden, a major supplier last year, shipped nothing so far this year. Finland, Czechoslovakia and Austria also failed to make shipments in 1948 and Norway's shipments of staple were nominal compared to last year.

An analysis of the production of rayon, nylon, silk and related broad woven goods for the first quarter made by the *Organon*, reveals that the output of 563,000,000 yards exceeded first quarter production of 1947 by 15 per cent and the first quarter of 1939 by 60 per cent. Output of rayon fabrics alone, excluding nylon, silk and other related fabrics, in the first quarter was at the annual rate of 2,200,000,000 yards.

First quarter output of 100 per cent filament yarn fabrics was at an all-time peak, exceeding last year's production by 17 per cent and the average quarter of 1939 by 36 per cent. If this quarterly rate of operations is maintained for the

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Photo by Ewing Galloway

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Ashworth Card Surveys will help to keep them operating at full capacity by pointing out card clothing needs before quality is impaired. They are made, free of charge, by practical card men, — at regular intervals, if you so desire. All card clothing, chains and bearings are inspected and a written report tells you their condition.

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AMERICAN CARD CLOTHING CO. (Woolen Div.)
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**Factory* †*Repair Shop* ‡*Distributing Point*

PRODUCTS AND SERVICES: Card Clothing for Cotton, Wool, Worsted, Silk, Rayon and Asbestos Cards and for all types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors for Platt's Metallic Wire. Lickerins and Top Flats Reclothed.

Ashworth PIONEERS IN CARD CLOTHING

4 FACTORIES . . . 6 REPAIR SHOPS . . . 7 DISTRIBUTING POINTS

balance of the year, an annual output of 1,300,000,000 yards of all-filament yarn fabrics would be realized.

With an increase in the available supply of rayon staple, production of 100 per cent spun rayon fabrics in the first quarter of 1948 showed an increase of 94 per cent over the corresponding quarter last year and more than double the average quarterly output of 1939. The gain in spun rayon fabrics was not made at the expense of rayon mixtures and blends, as output of these types of cloth showed an increase over the fourth quarter of 1947, but 35 per cent below the first quarter of 1947.

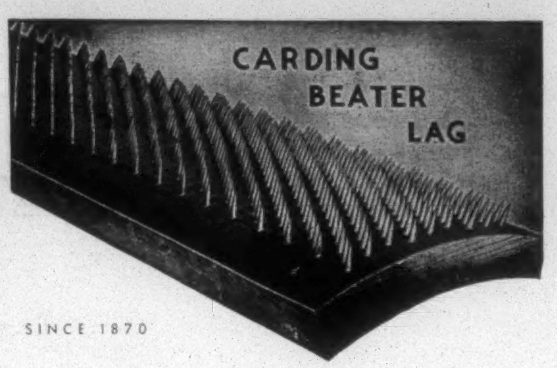
Production of nylon, silk and related fabrics in the first quarter of the year was slightly below the output in the same period last year, but 21 per cent over the fourth quarter level. Silk fabric production continues to drift along at a rate between 2,000,000 and 3,000,000 yards per quarter. First quarter nylon fabric output totaling 5,500,000 yards was 28 per cent above the fourth quarter of 1947 but 29 per cent under the first quarter of last year.

First quarter 1948 production of tire cord and fabric amounting to 149,000,000 pounds was two per cent above the fourth quarter of 1947 but slightly less than the first quarter of 1947. Compared to the average quarter of 1939, tire cord and fabric production is up 122 per cent. Cotton tire cord and fabric in the first quarter was down 5½ per cent under the corresponding quarter in 1947 while rayon and nylon tire products were up seven per cent.

Du Pont Charlotte Sales Offices Moved

All Charlotte, N. C., district sales offices of the Du Pont Co. opened headquarters July 7 in a building erected for them at 427 Fourth Street. The structure, two stories and a pent house used as a laboratory, is brick, fully air conditioned, and newly-equipped and furnished to serve Charlotte region customers of four of Du Pont's ten operating departments—Organic Chemicals, Rayon, Grasselli Chemicals, and Electrochemicals. Formerly the district offices were in the Duke Power Building, 414 South Church Street.

The Rayon Department will occupy the entire first floor of the structure. It will be the headquarters of Davis L. Lewis, Jr., district sales manager of the Rayon Division; James J. Cook, of the Acetate Division; and David B. Hardin, of the Nylon Division; and their staffs. The district sales offices of the Organic Chemicals, Electrochemicals, and Grasselli Chemicals Departments will be on the second floor. There will be the offices of D. C. Newman,



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Southern sales manager, and Robert Sloan, Charlotte district manager, of Organic Chemicals; L. R. Kennette, Charlotte district sales manager for Electrochemicals; and Henry F. Koll, Charlotte district sales manager for Grasselli. The pent house is occupied by the district dyestuff service laboratory of Organic Chemicals. The new property has its own ample parking facilities adjoining it.

Machinery Firm Honors Veteran Employees

The 25 Year Club of Foster Machine Co., Westfield, Mass., made up of 62 members who have served the company for periods ranging from 25 years to 49 years, held its first annual meeting and dinner June 25. Each member was presented with a gold service pin. The pins are in the shape of the Foster cone with a stone on the pin indicating the number of years of service as follows: 25 years, pearl; 30 years, amethyst; 35 years, ruby; 40 years, sapphire; 45 years, emerald; 50 years, diamond. Officials of the firm were guests at the meeting.

Renegotiation Provision Clarified By Q. M.

The commanding officer of the New York Quartermaster Purchasing Office, Department of the Army, recently issued a memorandum to industry pointing out that there has been considerable misunderstanding in industrial circles concerning application of renegotiation provisions under the Supplementary National Defense Appropriation Act of 1948. He declared that commodities normally purchased by his office, such as woolens, worsteds, cottons, rayon, clothing, underwear, et cetera, do not fall within the renegotiation provisions of such act.

Industrial Cotton Consumption Shows Gain

Cotton consumption in 24 major industrial markets registered a 25 per cent increase during the eight-year period 1939-46, the National Cotton Council reveals. The increase in cotton was revealed in a detailed study of cotton consumption trends in the third supplement of "Cotton Counts Its Customers," a continuing survey of cotton markets by the council's market research department. Consumption of cotton in the 24 markets ranging from automobiles to awnings and tarpaulins increased from 2,439,570 bales in 1939 to 3,051,250 bales in 1946, the report showed.

The greatest single increase was in automobile tires, where cotton usage jumped from 610,000 bales in 1939 to 764,340

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bales in 1946, an all-time record. For all automobile uses, including tires, cotton consumption climbed from 696,330 bales in 1939 to 856,870 bales in 1946. Other notable gains were registered in cordage and twine where the consumption figure for 1946 was 300,790 compared with 239,250 bales in 1939.

Shoes, which stood fifth among cotton's industrial markets in 1939, using 157,740 bales, became fourth industrial consumer of cotton in 1946 with 203,290 bales. Insulation, including both electrical and thermal insulating materials, in 1946 was claiming 180,910 bales of cotton as compared with 82,110 bales in 1939. Fishing supplies used only 18,830 bales of cotton in 1939, but in 1946 constituted a market for 56,510 bales. Mattress felts consumed 25,000 bales in 1939 against 83,160 in 1946.

The only large industrial market in which sizeable losses were registered was bags. In 1939, the bag industry was utilizing 502,090 bales of cotton. This figure had declined to 467,630 bales in 1946. To meet the challenges to the bag market which have been aggravated in recent months by losses in the flour bag field, the raw cotton industry, textile bag manufacturers, textile merchants, and textile mills soon will initiate a broad new sales program involving expenditures up to $400,000 annually.

The council study pointed out that industrial uses rank high in importance to the cotton industry. Industrial uses account for approximately 40 per cent of the total cotton consumption in the United States. "These markets are vital to the continued welfare of the cotton industry," the council stated. "Cotton must be strengthened in those markets where it is competitively weak; it must be made stronger in those markets where it is now strong. Research and sales work are the tools through which this can be accomplished."

The new supplement to "Cotton Counts Its Customers" is being distributed to cotton spinners through the American Cotton Manufacturers Association as a part of the joint program of the council and A. C. M. A. to keep cotton manufacturers supplied with the latest information of cotton consumption trends. Copies of the booklet may be obtained by writing direct to the National Cotton Council, P. O. Box 18, Memphis, Tenn.

Chattanooga Yarn Men Plan Outing Oct. 14-15

The Chattanooga (Tenn.) Yarn Association will hold its annual outing and golf tournament Oct. 14-15 at the Chattanooga Golf & Country Club. Guests will be accommodated at the Read House and Patten Hotel, Chattanooga.

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Name Group To Work With Planning Office

The Narrow Fabrics Division of the Cotton-Textile Institute has organized a committee of leading manufacturers of tapes, webbings, ribbons, braids and elastic fabrics to cooperate with the Quartermaster Industrial Planning Office. The group held its initial meeting recently with representatives of the New York Quartermaster Industrial Planning Office headed by Col. J. T. McDowell. Industry problems and facilities available for production of military items were discussed along with specifications and the experiences of the industry in supplying the armed forces in the last war.

Produce Ludox In Commercial Quantities

The Du Pont Co. announces that Ludox colloidal silica—a new product used by the textile industry—is now being produced in full-scale commercial quantities. A new unit to manufacturer this water solution of "sand" has just been completed at the East Chicago, Ind., works of the Grasselli Chemicals Department. Deliveries of Ludox can now be made in any desired quantities.

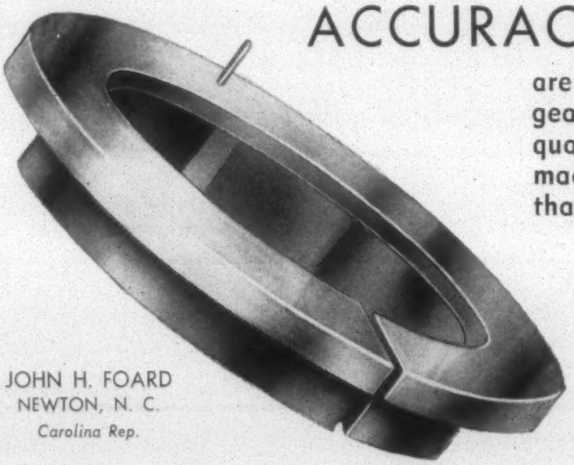
When first announced by Du Pont in October, 1947, Ludox was available only on a small scale in 18 per cent silica concentrations. As a result of additional research and development work, stable solutions with a concentration of 30 per cent are now being produced. So far as is known, such a high concentration of stable silica in dispersion has never been available commercially. This higher concentration permits substantial reduction in shipping costs and simplifies storage problems. Du Pont chemists also believe that it will broaden the field of application for Ludox. Development of this new high-solids colloidal silica is in line with the long established policy of the company of constantly seeking to make its products better and more versatile.

Ludox already is being used in a variety of fields. It is effective in weave-setting treatments for rayon fabrics and in other textile applications. In rayon it increases friction between the fibers, thereby improving fabric stability. It also strengthens yarn. In addition, it is finding applications in modifying many types of aqueous solutions and emulsions where it increases bond and film strength, and water resistance of adhesives, sizes or coatings. It also reduces objectionable stickiness or tackiness.

Cotton Goes Mechanical At Record Speed

Cotton—bulwark of the $10 billion textile industry—is now in the throes of a dual mechanization that bids fair to revolutionize the entire production cycle of this snowy staple from farm to mill. "A host of new machinery, ranging from cotton pickers to intricate and automatic thread spinners are being manufactured and installed at record rates," declares Arthur B. Studley, sales executive of SKF Industries, Inc., and chairman of the American Society of Mechanical Engineers' textile division. With textile earnings and purchases at an all-time high and wage levels and living conditions at a point where the industry can compete for skilled workers with most others, King Cotton is "more securely enthroned" than ever before, Mr. Studley says.

Textile mills last year spent in excess of $400,000,000 for new plants and equipment, he says. Furthermore, expendi-



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tures are continuing at a high rate this year and at least one-fifth of the nation's textile firms expect to spend even more in 1949—a great part of which is earmarked for cotton mills and machinery since cotton accounts for more than three-fourths of the poundage of all textile fibers used in the U. S.

"A notable feature of new mill machinery is the record-breaking use of anti-friction bearings in many types of spinning, weaving and knitting units where emphasis is now on labor-saving, less maintenance and longer wear," the SKF official says. Mr. Studley reports that while only 8,400 gins are in operation today, compared with 12,000 in 1938, the lesser number meets all demands due to more efficient cleaning and drying processes. Statistics also show a seven-to-ten-fold increase in use of spindle type pickers.

Cotton's robust position is attributable to several pertinent factors, Mr. Studley says, including a 4,000,000 population increase since 1945. Every U. S. inhabitant, for example, annually consumes 26 pounds of the ubiquitous product compared with about 24 in 1935-39 period. This means that more than three billion pounds of cotton are being used yearly in some form, with automobile tires the largest single user. Some statisticians estimate that the assembly of every million cars requires the production of 400,000 acres of cotton farms.

Mechanical innovations, contributing to what may be the greatest sociological and economic strides that cotton has made since Eli Whitney invented the gin, include: greater use of automatic controls; looms with speeds two or three times faster than heretofore possible; widespread use of ball and roller bearings in virtually everything that turns in a mill; multiple-purpose equipment that eliminates or combines operations, and many other engineering improvements designed to enhance the quality and quantity of this picturesque commodity.

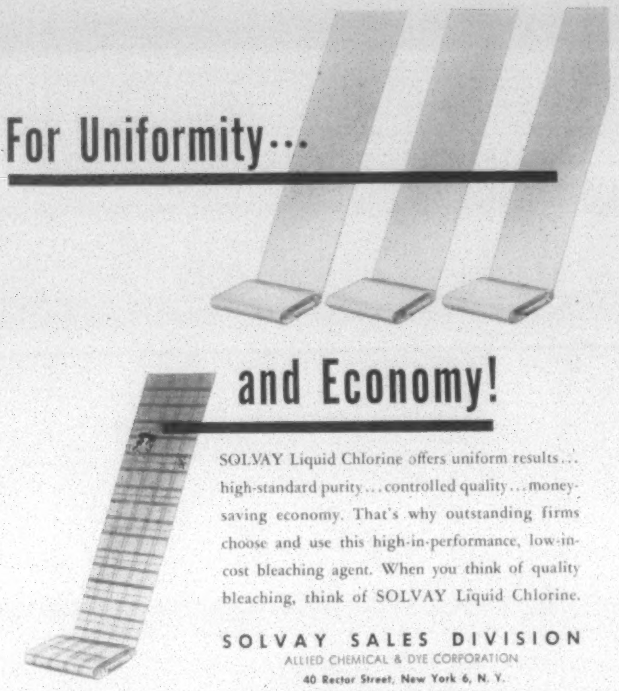
N. A. C. M. Annual Parley Slated Sept. 16-17

The 94th annual meeting of the National Association of Cotton Manufacturers will be held at the Marshall House, York Harbor, Maine, September 16-17, 1948. Tentative plans for the meeting call for business sessions and a banquet on Sept. 16, with sports and educational tours featuring on the following day and concluding with a clambake that evening. Details of the program will be released at a later date and will include the list of speakers to be heard at the meetings on Sept. 16.

Textile Freight To New York Moving Faster

Material improvement of the time in transit for textiles moving from Southern mill points to the New York area by rail was reported recently by Thomas Smith of Cone Export & Commission Co., chairman of the Traffic Group of the Association of Cotton Textile Merchants of New York. "Rail deliveries of textiles from Southern points are considerably better today than they have been in some months," Mr. Smith said, citing reports received in a survey of members of the group's steering committee. He noted deliveries to customers in New York seven days out of North Carolina mill areas, and from seven to not more than ten days from South Carolina points. The group, he said, is hopeful that time in transit will show further improvement in the near future.

Part of the improvement according to reports to the group from railway officials is because textile freight is now being



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unloaded overnight from cars in Jersey City and trucked into New York, which saves considerable time as compared with the earlier method of floating cars across to piers for unloading. Reports to the group also note improved deliveries in the garment center uptown where congestion is apparently less than heretofore. The traffic group, Mr. Smith stated, is keeping a close check on time in transit and cooperating with railways and trucking lines for better service. Whether it will be possible to maintain shortened periods in transit when textile freights increase under the movement of goods for the Fall season, which will be heavier by mid-Summer, is uncertain.

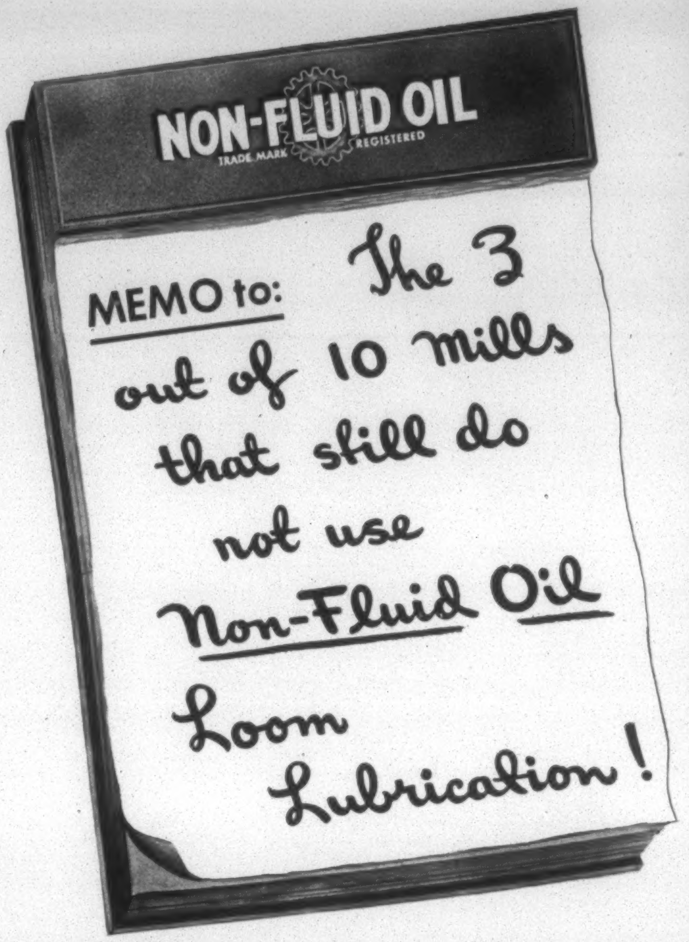
New Wage Minimum Attacked By Murchison

The opposition of the cotton textile industry to the setting up of a new wage minimum under the Public Contracts Act was voiced July 8 by Dr. C. T. Murchison, president of the Cotton-Textile Institute, at a hearing before the administrator of the act. Dr. Murchison said that the establishment of a new wage minimum is unnecessary at this time from any social and economic point of view, pointing out that conditions have changed greatly since the law was first enacted back in 1936. Cotton mills now are employing 529,400 workers as compared with 411,000 in 1936 and wages have advanced 200 per cent, from 36 cents to $1.08 and hour.

He declared, "This advance was achieved without benefit of the Public Contracts Act, under which the minimum wage determination never exceeded 40 cents per hour and without benefit of the Fair Labor Standards Act. When wages can double and even triple through the normal procedures of collective bargaining or voluntary unilateral action and when the economic conditions are present to sustain these gains, and possibly to carry them even further, it seems wholly gratuitous to resort to the dead and unrealistic hand of legal power."

Coverage of the Walsh-Healey Act in the textile industry is fragmentary, sporadic, discontinuous and uncertain, he said. He cited this as an example, "A given cotton mill might be producing not more than five per cent of its output for the government. This might represent a schedule which would last not more than a few weeks or a few months. Yet such a mill would be forced into complicated record keeping, into arbitrary allocations of its working forces for purposes of the law, such allocations being in large measure completely arbitrary because of the impossibility of segregating materials and processes for government account. It probably would exist all the way from yard workers and carpenters to shipping room clerks and truck drivers. It might be that certain other materials used on government contracts would be procured from other mills. This automatically transfers the whole question of wages and hours to these outside suppliers and imposes upon the prime contractor a serious liability which under the circumstances would be wholly unreasonable for him to assume.

"If the minimum wage rate under the Walsh-Healey Act is brought within actual prevailing brackets, the result is to enmesh the manufacturer in a web of legal entanglements which not only afflict him with complicated and expensive administrative responsibility but reach outward with equally enmeshing results to all of his suppliers. This type of wage regulation, therefore, needs much to give it justification. It needs a condition of under-employment; it needs a condition of labor exploitation; it needs a condition of great variation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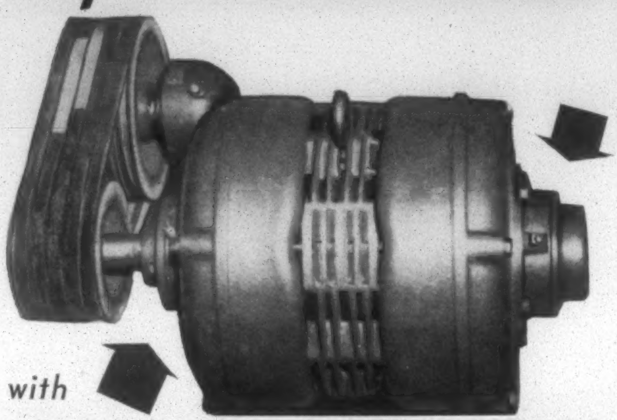

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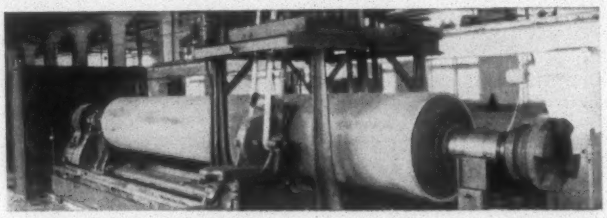

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in wage rates from one competitor to another. When such conditions as these are present the expense and burden of regulatory devices as incorporated in the Walsh-Healey Act can be justified in the public interest. But today no such conditions are present. No application of the Walsh-Healey Act can create any benefits of any kind whatsoever which we do not already have. Consequently, the entire body of negative aspects contained in the administration of the act are wholly without offset by any form of feasible benefit."

New Research Center Opened By Goodrich

A new, multi-million dollar research center which will "make it possible to bring scientific discoveries to maturity three or four times faster than at present" was inaugurated at Brecksville, Ohio, by The B. F. Goodrich Co., June 15. Brecksville is a suburban community midway between Akron and Cleveland. At the opening ceremonies, John L. Collyer, president of the company, said that "the center is, we believe, the most complete industrial workshop of science now in existence." The six buildings on the 261-acre site are all equipped with the latest scientific tools and equipment.

In addition to probing into the mysteries of crude and man-made rubber, Goodrich will conduct intensive research in such fields as chemicals, plastics, agriculture, horticulture and the application of nuclear energy to rubber manufacturing. Atomic energy's usefulness and effects in rubber and related materials will be studied in one of the center's laboratories. The main building of the new center is a three-story structure which contains no windows except at the ends of hallways. It is 226 feet wide, 172 feet deep, contains 81 individual laboratories, a cafeteria, assembly hall seating 250, and a 10,000-volume library, largest of its kind in the world.

In an inaugural meeting with company directors, officials and research and technical men, President Collyer described the new research center as "a monument to the faith of B. F. Goodrich in the effectiveness of research and development." He pointed out that in 1895 the firm established the first research laboratories in the rubber industry.

O. T. S. Offers Abstracts Of Seized Patents

A compilation of abstracts of 358 United States patents formerly owned by nationals of enemy countries and seized by the Department of Justice, Office of Alien Property, since November, 1945, is now on sale by the Office of Technical Services, Department of Commerce. Most of the patents are available for licensing to American firms by the Office of Alien Property on a royalty free, non-exclusive basis for the remaining life of the patents.

The compilation is one of several groups of patents that will be issued from time to time in co-operation with the Office of Alien Property, Mr. Green, O. T. S. director, said, and covers patents not included in the published abstracts distributed by that office. O. T. S. has undertaken this publication service as a part of its general function of making technological information from government sources available to American businessmen, he explained. The abstracted patents on the compilation are classified into broad groups such as chemicals and allied products, electrical machinery, equipment and supplies, textiles, etc.

Copies of the compilation (Report PB-88841, *List of Vested Patents Available from Office of Alien Property,* 85 pages) sell for $4. Orders should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., accompanied by check or money order payable to Treasurer of the United States. Copies of the patents may be examined in Room 1325, Commerce Building, Washington, D. C.

A leaflet called "Index and Guide to Enemy Patents vested in the Attorney General as of January, 1947," which contains general information about the availability of enemy patents, is available free of charge from either O. T. S. or the Alien Prodperty Custodian. All communications concerning the licensing of enemy patents should be addressed to the Office of Alien Property, Department of Justice, Washington 25, D. C. Copies of individual patents may be purchased only from the Commissioner of Patents, U. S. Patent Office, Washington 25, D. C., for 25 cents each. Orders must specify the serial number of each patent desired.

Testing Co. Holds Textile Refresher Course

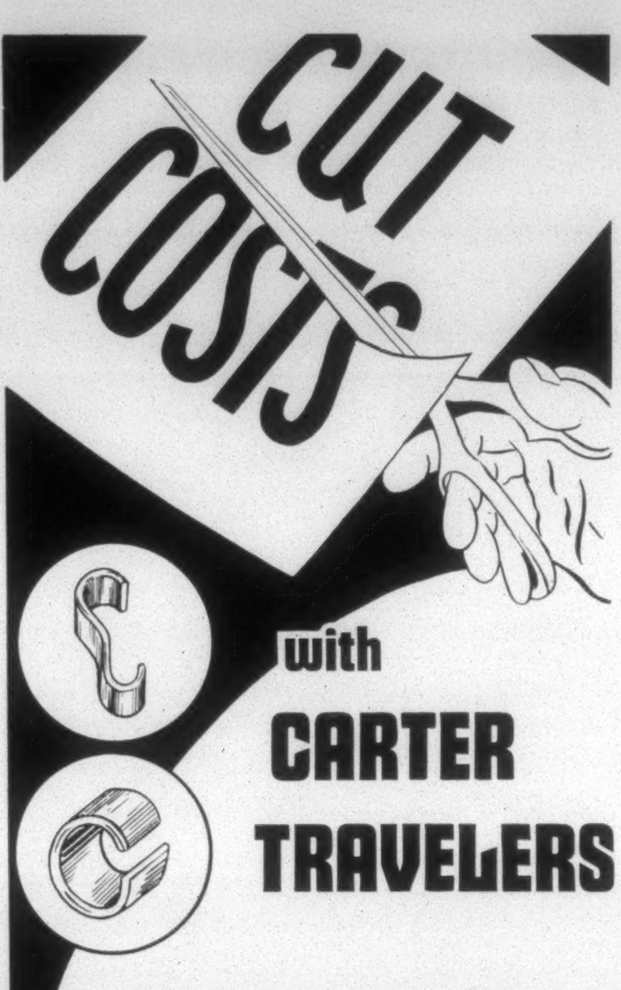
The first session of the tenth annual Refresher Course in Textiles and Testing Techniques, conducted each year at the United States Testing Co., Inc., Hoboken, N. J., opened July 13 with 19 colleges and universities represented as well as the Quartermaster Corps, U. S. Army and several leading textile concerns. The first meeting opened with a welcoming luncheon which was addressed by Allen L. Brassell, president of the Testing Co. The course of lectures and demonstrations continued through July 30, and was under the direction of James Giblin, head of the textile design department of the New Bedford (Mass.) Textile Institute. The students worked with technicians in the five major divisions of the United States Testing Co., including chemistry, engineering, bacteriology, textiles and physical testing. Most of the expense for the course was borne by the Testing Co. as a practical method of presenting new scientific developments to educators.

Cheese Industry Doubles Cotton Consumption

The American cheese industry doubled its consumption of cotton during the eight-year period, 1939-46, the National Cotton Council's market research department announced recently. Cotton bandages, caps and circles for wrapping the protecting cheeses consumed 1,035,000 pounds of cotton in 1946. In 1939 only 505,000 pounds of cotton were required by the cheese industry.

Metal Tones Feature Spring Woolen Colors

Metal Tones, a distinctive group of subtle off-shades, are a significant style feature of the Confidential Advance Woolen Collection for Spring, 1949, just issued by The Textile Color Card Association to its members. Reflecting a decidedly new character, these six smart colors, as described by Margaret Hayden Rorke, managing director of the association, are classic basic shades of light-medium tonality. They comprise Tarnished Gold, a rich burnished version, Bronze Lacquer, an illusive bronzed green, Metal Tan, an unusual tawny shade, Silver Lustre, a cool grey with a soft sheen, Pink Copper, an intriguing rosy rust, and Blue Ore, a misty steel blue. These highly individual Metal Tones are especially adapted to costumes and millinery for town and casual wear. Their importance is further em-



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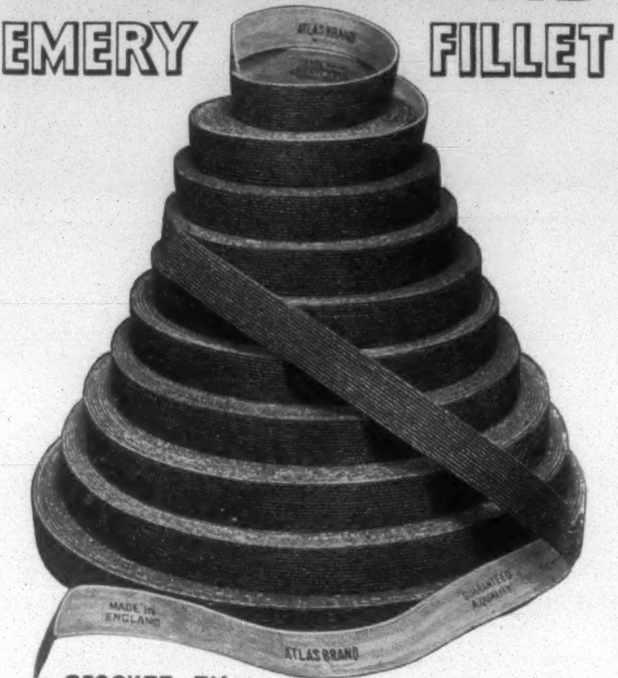

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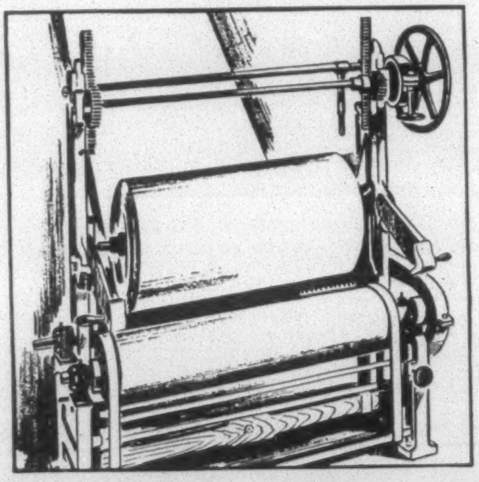

Cut-Off Winder

The improved Simpson Cut-Off Winder has pneumatic cut-off and automatic slitter. Saves refinishing up to 50 yards of cloth that normally is spoiled in completing one roll and beginning another. Saves heavy lifting. Saves time. Made in 50" and 60" widths, or special widths as desired.

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phasized by the fact that they will be repeated under the same names in the 1949 Spring Rayon Collection, to be issued shortly to the association's members.

Spin Nylon Yarn On New Delaine Machinery

Running test quantities of nylon through the new short-cut machinery for spinning fine worsted yarn at the plant of Associated Spinners, Inc., Gastonia, N. C., has produced spun nylon with unparalleled softness and strength—equalling that of the finest cashmere—it was announced July 27. The new plant in Gastonia is devoted primarily to spinning zephyr-type worsted yarn for the knitted outerwear trade. Its new Delaine process machinery eliminates as many as five steps from the older French or English systems for spinning worsted yarn.

Virgin nylon staple has been run through the plant in pilot operations, it was reported by Milton E. Tager, Associated's president. Result has been strong, even spun nylon that is ideal for women's sweaters, men's hosiery, sport shirts and other types of knitted outerwear. Best results have been obtained, Mr. Tager said, in two-ply 15s and 20s sweater and hosiery yarn and in three and four-ply hand knitting sizes.

"These test operations convince us," Associated's president declared, "that as more nylon becomes available, the ability of our new process machinery to fully bring out the basic properties of nylon will prove to be a significant factor in helping the synthetic fiber to supplement and in some cases to supplant worsted for outerwear and men's argyle socks and hosiery.

"In addition to its strength and cashmere-like softness," Mr. Tager continued, "other properties of this spun nylon should make it increasingly desirable for all knit goods. Its ability to withstand many washings without shrinkage, to handle perspiration like worsted yarn, and its resistance to moths and other insects set it aside from the natural fibers."

Sweater manufacturers who have received initial shipments of spun nylon manufactured at Associated Spinners have reported "great success" with the product, Mr. Tager said. They have found that fabrics made of these yarns are as warm as wool of comparable weight, and their only regret is lack of steady supply, he added. Of particular importance to manufacturers is the fact that the yarn as it leaves the Associated plant is snow white and virtually equal to double bleached white worsted yarn without further processing.

Amend Suit Charging Glass Fiber Monopoly

Changes in the charges of violation of Sherman Anti-Trust Act brought by the government against Owens-Illinois Glass Co. and Owens-Corning Fiberglas Corp., both of Toledo, Ohio, and Corning (N. Y.) Glass Works, were made in an amended complaint recently filed in Federal Court at Tolado. The presiding judge had granted defendant concerns four moves to strike certain words from the original complaint filed last September, and two other requests that government charges be made more specific.

No change was made in the original charge that the concerns had conspired to monopolize the production of glass fibers in the United States and that they had entered into cartel agreements with principal foreign producers to buttress their monopoly. The concerns were granted the right to have a definite date fixed as to the length of alleged monopoly and the amended complaint sets the period as "1933 to the present time."

Ordered to specify how Owens-Corning had maintained domination over the fiber glass industry, the government charged that Owens-Corning did so by obtaining manufacturing patents either from the parent firms, Owens-Illinois and Corning Glass, or from foreign sources. The suit charges that Owens-Corning manufactures 98 per cent of all fiber glass made in the United States and that Owens-Illinois and Corning Glass each owns 45 per cent of the stock in Owens-Corning. It asks that the two concerns be required to relinquish their Owens-Corning stock and that the fiber glass company be required to divest itself of such plants and properties as are necessary to establish independent and competitive business in the industry.

Spinner-Breeder Conference Set Sept. 20-22

The annual Spinner-Breeder Conference sponsored by the Delta Council, Stoneville, Miss., will be held Sept. 20-22 at the council's laboratory at Stoneville. Details of the program for the event, which is expected to draw a large attendance, will be announced later, according to B. F. Smith, assistant manager.

Estron Fails To Gain F. T. C. Recognition

The controversial "Estron" or "rayon" problem became more complicated last month with the following developments: The American Society for Testing Materials at a meeting in Detroit, Mich., approved the report of committee D-13 on textile materials, including recommendations for changes in definitions of rayon and a new generic term, Estron. The Federal Trade Commission, however, refused to change its position and recognize Estron as a generic term, contending that rayon is the only proper generic term for all such synthetics. An F. T. C. spokesman said the commission planned to push its complaint against Celanese Corp. of America to a close to establish that rayon is the only acceptable generic term for synthetics made by the cellulose acetate, cuprammonium and viscose processes.

The A. S. T. M. change in the definition of rayon restricts it to regenerated cellulose (viscose and cuprammonium) yarns and fibers. Estron is the new A. S. T. M. generic term for cellulose acetate and other cellulose esters. Also approved by the society were recommendations that tentative definitions be revised by the deletion of certain terms regarding the flammability of fabrics, and the addition of new terms on combustible, non-combustible, inflammable and non-inflammable fabrics. Revisions also were approved in definitions of the terms plush, velvet, velveteen and wool, and for monofilament textile, standard condition, sley, carded yarn, combed yarn, velour and frieze.

Cotton-Textile Institute To Meet Nov. 11

The 22nd annual meeting of the Cotton-Textile Institute, Inc., will be held Nov. 11 at the Plaza Hotel, New York City. Keynote of the program will be the new political and economic situation likely to evolve from the presidential elections Nov. 2 and the probable effects of this situation on the cotton textile industry. It will be a one-day meeting, consisting of a morning session, a luncheon session, direc-

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tors' meeting in the afternoon and a banquet in the evening. Each session will be high-powered and will be marked by illuminating talks by top-notch performers, it is reported.

Bureau To Continue Quarterly Surveys

The Washington office of the National Cotton Council reported last month that it had received assurances that the Census Bureau would continue textile fabric surveys on a quarterly basis. It had been feared that the bureau, faced with a $300,000 cut in appropriations for the industry division, would place all textile fabric surveys along with most apparel surveys and other important statistical services on an annual basis, or in some instances, eliminate them.

Manufacturers Review Wool Research Program

Representatives of leading wool textile producers of the nation last month showed keen interest in the four-year program of fundamental research into the physical and chemical characteristics of wool sponsored jointly by the American Wool Council, the International Wool Secretariat and the Textile Research Institute. The plan and purposes of the program were presented before a meeting of wool manufacturing members of the Textile Research Institute at Princeton, N. J., by Dr. J. H. Dillon, the institute's director of research. During a discussion by those attending, it was pointed out that the research findings undoubtedly would have application to many phases of wool textile manufacturing beyond the immediate purposes set forth.

The research program, hailed as a long forward step in providing a solid base by which the wool and wool textile industries can solve the problems arising from lack of sufficient supplies of fine wool to meet world demands, was first discussed by the American Wool Council and the National Wool Growers Association with representatives of the International Wool Secretariat last January.

Since that time, conferences both in the United States and in London—including a visit to America by Dr. E. G. H. Carter, director of scientific research of the International Wool Secretariat—have resulted in formulating plans for an international research program.

The research studies, to be carried out in the laboratories of the Textile Research Institute and the Textile Foundation at Princeton, propose to examine the basic physical and chemical properties and morphology of wool fibers of various types and grades and to determine the relationship of these fundamental fiber characteristics to spinning quality, yarn character and the properties of fabrics produced from them. All results of the research will be published in recognized scientific journals.

The need for such a program at the present time is pointed up by the world scarcity of fine grade wools and a demand for them that is the greatest in history. Wool consumption in the United States has doubled the pre-war average; world consumption is up ten to 15 per cent. Meanwhile, production of the finer grades of wool throughout the world has declined 40 per cent since 1942.

In addition to participating in the discussions, those attending toured the laboratories of the Textile Research Institute and, during the afternon, heard talks by Roland

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Barker who discussed "A New Approach to Fiber Studies," and by Harris Burte who discussed "Mechanical Properties of Wool."

Those attending the session were: Alex Morrison of the American Woolen Co.; T. A. Griede of Wyandotte Worsted Mills; John C. Folke of A. M. Karagheusian, Inc.; Edward J. Cogovan of Mohawk Carpet Mills, Inc.; R. M. Ingham, Jr., and John H. Abt of Deering, Milliken & Co., Inc.; W. W. Bayley and R. W. Canovan of Sidney Blumenthal & Co.; J. C. Van Nest of Goodall-Sanford, Inc.; J. B. Goldberg of J. P. Stevens, Inc.; Harold S. Dahlberg of Kenwood Mills; A. G. Ashcroft of Alexander Smith & Sons Carpet Co.; F. R. Haigh and Fred Noechel of Botany Mills, Inc.; James Wilson, Kenneth Wilson and Werner von Bergen of the Forstmann Woolen Co. Among others present were: D. B. MacMaster, Julian Jacobs and John C. Whitwell of the Textile Research Institute; and John K. Murphy of the American Wool Council.

Bobbin Producers Consent To F. T. C. Order

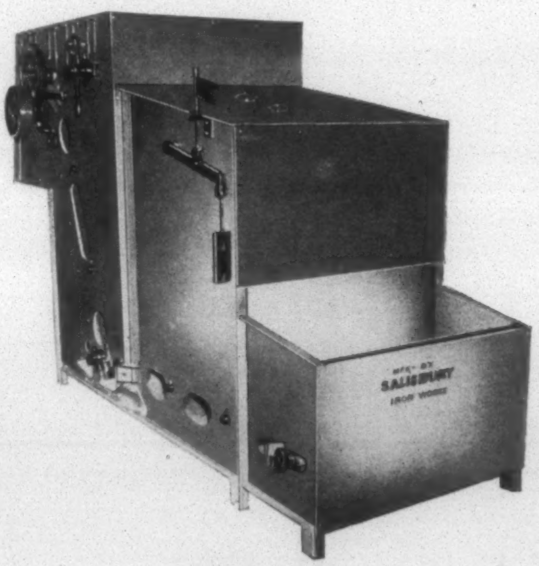
To avoid the "trouble and expense" involved in contesting the charges, the Bobbin Manufacturers Association, Boston, Mass., its officers and 11 individual Eastern and New England producers of spinning and weaving devices July 7 consented to issuance of a Federal Trade Commission cease and desist order against them. The trade association and manufacturers had been charged with entering into an illegal price-fixing conspiracy. The F. T. C. complaint said the respondents, as part of the alleged conspiracy to eliminate price competition in the industry, concertedly fixed and maintained prices, discounts and terms and conditions of sale.

Says Most Annual Reports Miss Goals

"Most annual reports of the general type now being issued by corporations fail in their purpose of informing people about these companies," says Daniel J. Hennessy, president of the Controllership Foundation, New York. "According to the findings of an exhaustive survey conducted for the foundation by Elmo Roper," he explained, "part of the large sums of money now being spent on company annual reports might well be directed into other channels if we wish to over-come misunderstanding and suspicion of business."

The survey referred to by Mr. Hennessy is being published by the foundation, and is entitled *What People Want to Know about Your Company.* It discloses that the average shareholder has little interest in corporation financial data. Only 11 per cent of those responding in the survey mentioned balance sheet items as things they needed to know about in order to keep track of an investment, while 40 per cent of the "run-of-the-mine" stockholders professed to find no utility in the brochures they receive.

"The average stockholder is naturally anxious to get dividends," the foundation's report declares, "and he is interested in what the chances are that his company will remain strong enough to safeguard his capital and pay the same, or a bigger, return on his money. To him these are



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The Salisbury Enclosed Blending Feeder has a heavy fabricated steel frame which makes it a rugged, durable, and trouble free unit. All gears and chains are covered with guards for safety.

Oilite bronze self-aligning bearings are used throughout, eliminating oil leakage and assuring clean fibres.

Provisions are made for the installation of automatic sprinkler head and vacuum lines. All usable waste fibres may be reclaimed from waste container.

Salisbury Blending Feeders are designed to allow installation of kick-off roll or combing attachment.

The machine may be used in a blending line or in combination with a picker.

This model is provided with ample storage space. This facilitates better blending of various fibres and requires less attention from the operator.

Model S BF-1 as shown is equipped with a lower or front apron which extends outside the storage chamber of the machine and has a small bin into which the raw material is placed by the operator. It is then carried into the storage chamber on the conveyor apron. This model also has a combing attachment as standard equipment.

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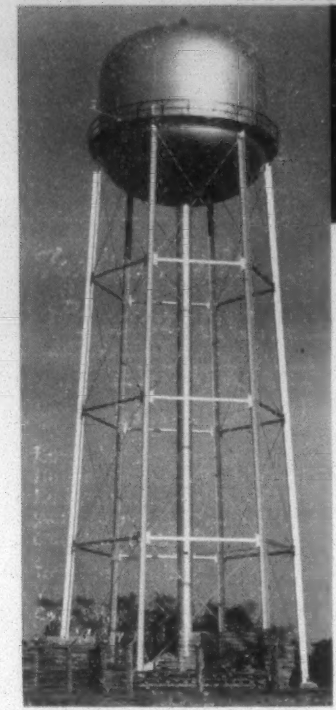

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simple questions that can be answered in a paragraph. If the company gives him complicated tables, charts and pictures, and page after page of text, there may be some danger of 'report indigestion.'

"The needs of large investors are another matter. Most of them are interested in all the details now published and want still more, but there is a vociferous minority who object to the new trend toward glossy paper, pictures and expensive format, terming them a waste of money."

The study reveals that no annual report issued for stockholders in general is likely to satisfy the needs of bankers, trust officers, financial analysts, investment counselors and other more sophisticated consumers of financial data, most of whom were found to have a variety of other sources of information.

In order to satisfy the run-of-the-mine stockholders who crave simple, easy-to-read information, and at the same time not to deprive the more sophisticated investors of the accounting facts and figures, the foundation's report recommends that the present practice of sending all stockholders the same type of annual report should be reconsidered. A more effective public relations technique, it suggests, might be to send them a one-page statement signed by the president, outlining earnings, dividends, general financial position and outlook of the company—and then offering a complete financial report on request. The latter would be a full-scale annual report designed primarily as a source document for those who wish ready access to "cold statistical facts."

The same brief digest appeals to employees, the report confirms. National labor leaders, on the other hand, were found to be primarily interested in facts useful to them in bargaining, so that they would know when to ask for increases and be able to support their claim that the company is in a position to pay. Local labor leaders and shop stewards who were interviewed professed little interest in the annual report.

Give Analysis Of Rearmament Effect

Prepared by the New York and Washington editorial staffs of Research Institute of America, Inc., 292 Madison Avenue, New York City, a comprehensive analysis, "How Rearmament Affects Your Business," has been published by the institute. It covers such problems as: How Armed Forces procurement will work, what goods are being purchased now, who is doing the buying and how it's being done. How to get set for allocation of plant capacity. What products will face a tight supply squeeze. What to expect under draft regulations—now and in the event of a national emergency; how to prepare for these regulations. A checklist for advance business preparation for industrial mobilization.

Defer Enforcement Of F. L. S. A. Interpretation

Enforcement of a new interpretation under the Fair Labor Standards Act regarding certain types of premium payment, necessitated by the recent Supreme Court decision in the longshore cases, will not go into effect until Sept. 15, 1948. Previously enforcement had been scheduled to begin July 1. This was announced June 28 by Wm. R. McComb, administrator of the Wage and Hour and Public Contracts Divisions, U. S. Department of Labor. In ordering the postponement, Mr. McComb said that information from both labor and management sources indicated that more time is required to make appropriate adjustments, or where necessary, to make revisions in collective bargaining agreements, due to varying requirements of union agreements as to reopening of contracts.

At the same time the administrator said that he expected soon to issue a statement outlining the principles he would follow in enforcement of the position he outlined in his Press Release No. 153 issued on June 11. The administrator explained that the major problem for management and labor growing out of the decision is that of bringing union agreements and employer practices into accord with the court's findings.

Many contract clauses in various industries leave employers wide open to suits requesting back pay for "overtime on overtime," says the Labor Relations Institute, New York, in an eight-page analysis of the recent Supreme Court Bay Ridge decision ordering back pay for longshoremen. The Court ruled that the contract "overtime" payments to the longshoremen were, in reality, just another straight time rate or a "shift differential" and must be used as the basis for computing the "regular rate of pay" on which overtime is to be calculated. The institute warns that industries other than the stevedoring industry that may be affected by the decision include textiles, machine tools and apparel trades.

The Portal Pay Act, enacted last year to protect employers against "travel time" claims, may also shield them to some extent by affording a "good faith" defense and a "statute of limitation" against "overtime on overtime" claims. The Supreme Court recognized this when it remanded the Bay Ridge case to the District Court for determination of the amount due.

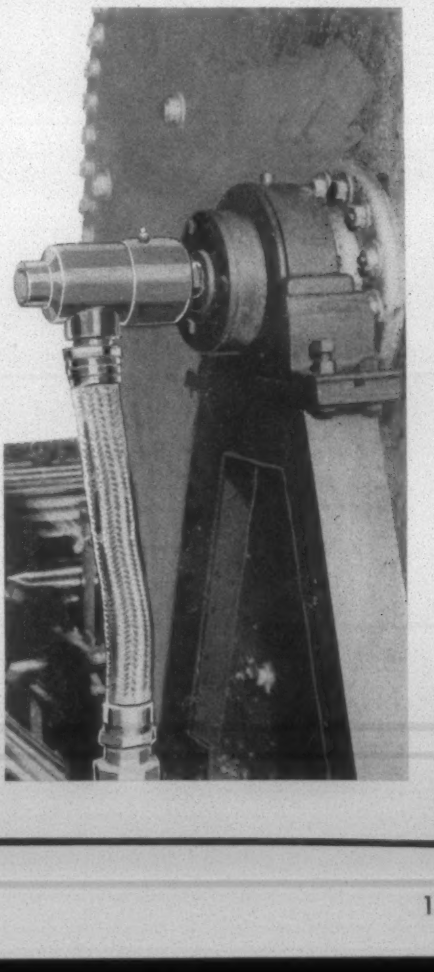
The institute's analysis, appearing in its regular publication, *Practical Methods in Labor Relations*, is available on request. For a complimentary copy, write to: Labor Relations Institute, 1776 Broadway, New York 19, N. Y.

Institute To Launch $750,000 Drive

Plans for a nation-wide campaign to collect about $750,000, to be launched this Fall, together with projects proposed for the new Philadelphia Textile Institute, were outlined at a recent luncheon session by Charles W. Carvin, national chairman of the development fund of the P. T. I. Foundation. Mr. Carvin, head of Charles W. Carvin Co., Inc., explained that this sum was to cover immediate needs only and that the foundation objective was to secure $1,389,910 additional in 1949 and 1950 to provide dormitory facilities, an auditorium and gymnasium building, and an endowment fund for maintenance of staff requirements. Bertrand W. Hayward, director, declared that the institute is the only privately owned organization of its type and should receive the support of an industry that operates on a principle of free enterprise.

Add Three Fabrics To "Wrinkle-Shed" Line

Dan River Mills of Danville, Va., recently announced the addition of three fabrics to its line of "Wrinkle-shed" cotton goods, bringing to six the number of fabrics so far treated with the new finish. John M. Hughlet, vice-president and general sales manager, revealed that the three new fabrics



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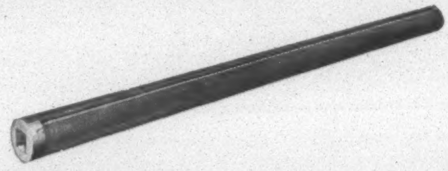

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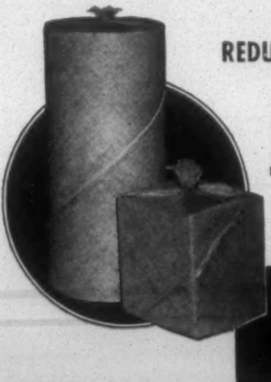

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to bear the wrinkle-resistant finish are a tweed in plain iridescent and plaids, a combed corded suiting and a plaid sports shirting. The goods are now in production. The cord and tweed will be offered for August, September and October delivery in the open line, Mr. Hughlet stated, and delivery of the shirting fabric will be made in the fourth quarter.

1947 Industrial Accident Facts Cited

Industry closed its books on 1947 with a better safety record than the year before, according to the National Safety Council. The 1947 industrial injury rates, released in advance of the 1948 edition of "Accident Facts," the council's annual statistical yearbook, show that the over-all accident picture is improving.

The accident frequency rate for all industries submitting company reports to the council, based on the number of disabling injuries per 1,000,000 man-hours, was 13.26 in 1947, a reduction of ten per cent from the year before. In eighth place was the textile industry, with a figure of 8.83.

The accident severity rate for all industries reporting to the council, based on the number of days lost per 1,000 man-hours, was 1.23 in 1947, a reduction of seven per cent from the year before. The textile industry stood ninth with a figure of .54.

Oscar Johnston Cotton Foundation Chartered

With the granting of a charter of incorporation by the state of Tennessee, the Oscar Johnston Cotton Foundation has become actuality, Harold A. Young, North Little Rock, Ark., president of the National Cotton Council, has announced. The foundation, formed in honor of Mr. Johnston, who established the Cotton Council in 1938, is empowered by the charter to receive "funds and property, manage and distribute same, or the income therefrom, to the National Cotton Council for the purpose of increasing the consumption of American-grown cotton, cottonseed and the products thereof."

Authorization was granted the foundation to support and encourage agriculture, horticulture and the mechanical arts; to increase throughout the world the consumption of cotton and cottonseed; to increase the exportation of American cotton; to improve cottonseed products; to develop economic and social conditions and the welfare of the inhabitants of the cotton producing states. Permission was also given to promote research in many forms, from development of seed to new fabrics and textiles; to collect and distribute information; to better the quality of cotton; to fight insects; and to combat legislation that will affect the future of cotton.

Mr. Young said that the next step in the organization of the foundation will be the election of officers from the trustees named at the Spring meeting of the council's board of directors. Trustees of the Oscar Johnston Foundation, representing all six branches of the cotton industry, include: Mr. Young; A. L. Durand, Hobart, Okla.; Wm. T. Wynn, Greenville, Miss.; Garner M. Lester, Jackson, Miss.; S. Y. West, Douglas Brooks, and Wm. Rhea Blake, all of Memphis, Tenn.

Rule Textile Hall Corp. Is Eleemosynary

A circuit court judge in Greenville, S. C., recently ruled that Textile Hall Corp. of Greenville is eleemosynary, tax exempt and due $750.02 which it paid under protest as 1944 Greenville County taxes. Asserting that there is no evidence in the record that Textile Hall Corp. operates for profit, the jurist quoted from a previous court ruling that upheld the constitutionality of a 1936 act that declared Textile Hall Corp. was eleemosynary.

Australia Curbs U. S. Textile Imports

After June 30 Australia will not import from the United States any clothing, sheeting or rayon and cotton dress materials except industrial cloths used by Australian manufacturers. With a number of minor prohibited imports from dollar areas, including cotton and rayon yarn, the Australian government hopes to save approximately $74,000,000 annually.

Fiber Consumption Analyzed In Report

Cotton still supplies almost 60 per cent of the nation's textile needs, but rayon consumption reached an all-time high in 1947 of nearly one billion pounds, or more than 12 per cent of total fiber requirements, the U. S. Department of Agriculture announces. Consumption of synthetic fibers other than rayon last year dropped somewhat below the 1946 level. All these fibers together, including nylon, accounted for only a small fraction of the national total—0.7 per cent. About 50 million pounds of these synthetics found a market in 1947, a drop of 3.5 million pounds from 1946, but slightly more than 1945 consumption.

These figures come from an annual survey of fiber uses just completed by Robert B. Evans and Barkley Meadows of the Southern Regional Research Laboratory in New Orleans. The survey is part of a study of trends in fiber consumption which the laboratory is making in connection with the research program on cotton utilization conducted by the Bureau of Agricultural and Industrial Chemistry.

As the survey makes clear, cotton remains by far the largest source of U. S. textile fibers. It accounted for 58.7 per cent of total consumption in 1947. Other fibers which helped to supply last year's textile demands were — wool (10.1 per cent of the total), jute (9.9 per cent), hard fibers such as sisal and Manila hemp (7.5 per cent), flax (0.3 per cent), silk (0.1 per cent), and soft hemp (0.1 per cent).

Synthetic fibers other than rayon covered by the survey included nylon, glass fiber, casein fiber and synthetic resin fibers. The figures released on consumption of these products were compiled from confidential reports submitted by manufacturers and therefore show only aggregate consumption. To avoid revealing operations of individual firms, no breakdown is given in the Department of Agriculture's report to indicate use of specific fibers of this type.

Until about 1935, rayon—made from cellulose—was the only synthetic fiber produced commercially in this country. Total consumption in 1940 was 482 million pounds, and during the next seven years the use of this fiber more than doubled. Before 1940, very little use was made of non-cellulosic synthetic fibers—that is, man-made fibers other than rayon. But beginning in 1940, consumption of these fibers increased rapidly from 4.5 million pounds to a peak in 1946 of 53.3 million pounds. Although use of some of the non-cellulosic synthetics continued to increase in 1947,

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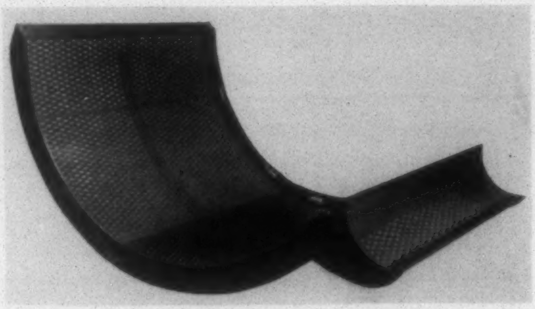

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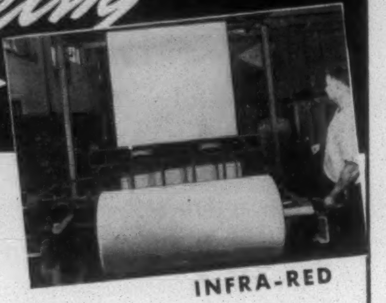

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aggregate consumption declined to 49.8 million pounds. This total greatly exceeds the combined consumption of silk, flax, and hemp last year, but it is small compared with the amounts of cotton, rayon, wool, jute, and hard fibers used.

Glass fiber is the oldest non-cellulosic synthetic fiber. Its production began about 1936, but output during the first few years was limited. About two years later began the production of vinyon, made of vinylite synthetic resin. Output of this fiber is still relatively small. Commercial production of nylon, most important of the new synthetic fibers, began in December, 1939, following a short period of pilot-plant operations.

Manufacture of aralac, a casein fiber, began on a pilot-plant basis in 1939, and this product reached commercial production in 1941. Recently the aralac plant has been sold to another concern which expects to begin very soon the production of a vegetable protein fiber. Raw material for this product will probably come from peanuts and corn. Saran, another fiber made from synthetic resin, was introduced commercially in 1940. Its textile use has been limited so far, since it has been made commercially only in monofilament form. Textile yarns generally consist of many fibers or filaments. Saran is scheduled in the near future, however, to appear in multifilament form.

Considerable research is underway, the Department of Agriculture reports, to develop additional synthetic fibers from such materials as vegetable and animal proteins and synthetic resins. Some have reached the pilot-plant stage, but since they have not yet been produced on a truly commercial scale, they were not included in the Southern Regional Laboratory's survey.

The following table shows total consumption of synthetic fibers other than rayon in the United States for the years 1940-47, as indicated by confidential reports from manufacturers. Totals given include domestic sales of nylon yarn and staple; sales of aralac staple; estimated consumption of saran as a textile fiber; production of glass fiber continuous filament yarn and staple 1941-46, shipments 1947; and consumption of vinyon yarn and staple. Fiberglas total for 1940 was estimated.

Year	QUANTITY (1,000s of pounds)	Year	QUANTITY (1,000s of pounds)
1940	4,471	1944	46,368
1941	11,663	1945	49,292
1942	23,743	1946	53,329
1943	37,200	1947	49,788

The survey notes that "Although silk has never comprised as much as two per cent, by weight, of the United States consumption of raw fibers during any five-year period, it has been of considerable importance because of its high monetary value. Consumption of unmanufactured silk (including raw silk and silk wastes) increased much more rapidly than did consumption of cotton and wool in the 37 years from 1892 to 1929—quantities made available for consumption, as indicated by imports for consumption, increased steadily from an average of eight million pounds per year during 1892-94 to a maximum of 98 million pounds in 1929. After 1929, however, consumption declined rapidly and, in 1940, the last full calendar year before imports from Japan were cut off, imports totaled only 48 million pounds. During 1942-44, only negligible quantities of silk were made available for mill consumption in the United States, but with the end of the war imports were resumed, and in 1946 totaled 16 million pounds. This quantity comprised only 0.2 per cent of the total consumption of raw fibers in 1946, as compared with 0.9 per cent in 1940 and a maximum of 2.4 per cent in 1931.

"The downward trend in silk consumption between 1929 and 1941 is closely associated with the development of the synthetic fiber industry in the United States. Production of all-silk broad-woven goods declined from 47.0 million pounds in 1929 to 6.5 million pounds in 1939, at the same time that the production of all-rayon broad-woven goods was increasing from 13.1 million pounds to 289.1 million pounds. And the decline in silk consumption would have been still more drastic if there had not been an expanding market for silk in women's hosiery during this period. At the beginning of World War II, nylon was just beginning to make serious inroads into silk's near monopoly of this market. Considering relative properties and prices of silk and competing synthetic fibers, it appears unlikely that silk in the future will be used in anywhere near the volume that it was just prior to 1940."

Appeal Decision In Silk Seizure Case

The U. S. Court of Claims on July 1 awarded $50,059 to nine dealers in raw silk who had sued the Federal Government in a bid to collect about $500,000 in their consolidated seizure case. The attorney for the silk dealers disclosed that he would appeal for reversal to the U. S. Supreme Court. The nine silk firms contended that the government underpaid them for raw silk stocks requisitioned in 1941. The government used the base price of $3.08 a pound, contending that the $3.57 price asked was the direct result of speculation on July 25, 1941, when Commodity Exchange traders in New York learned silk freezing was imminent. Raw silk trading was suspended the following day.

Japanese Again In Fish Net Field

Possible revival of Japanese competition is looming in the important fish net field, according to the Textile Export Association of the United States. Japanese fish nets are now being offered for sale on the West Coast at prices below the cost of production of domestic manufacturers of the same items, the association reports.

In a protest lodged with the government agencies involved in the supervision of Japanese industry, the association points out that firms on the West Coast are offering Japanese fish netting at $4.25 per pound, delivered U. S. A. ports with ten per cent discount for dealers. This same type of netting is priced at about $5.80 per pound by American manufacturers. The association declares that Japanese competition, if allowed to go unchecked, will undermine the domestic net industry whose costs have risen sharply over

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the war years. In its protest, the textile group assert that the netting industry was hard hit by Japanese competition in the '30s when Japanese suppliers took over one-third of the market here.

The netting industry, the association states, is vital to the American defense. During the war 90 per cent of the production of netting factories went to the armed forces. Every piece of military equipment sent to the battlefields was equipped with three camouflage nets. The industry supplied the parachute cargo nets which were used in a number of engagements in which paratroopers played a decisive role, notably in the seizure of Attu. Also, large quantities of netting were shipped out under the Lend-lease program, especially to Russia where they were used by the fishing industry, thus enabling the Russians to obtain part of their food requirements.

Foremen's Association To Meet In Philadelphia

The 25th anniversary of the National Association of Foremen will be celebrated during the annual N. A. F. convention to be held in Philadelphia Convention Hall, Sept. 23-25, according to B. A. Hodapp, president. At the same time, Frank Irelan, general manager of Delco Division of General Motors and 1948 national N. A. F. convention chairman, predicted the combined convention and quarter-century celebration would draw the largest attendance in N. A. F. history. Mr. Irelan said all the important industrial associations in the Philadelphia area are joining with N. A. F. as co-sponsors. Included in this group is the Philadelphia Textile Manufacturers Association.

The reference management committee of the Industrial Council, Philadelphia Chamber of Commerce is serving as a local advisory committee for the N. A. F. convention with Richard B. Holmes, general manager, Link-Belt Co., Philadelphia, Pa., as chairman.

One of the features of this year's convention will be a series of workshops on areas of vital interest to club officials and members of the more than 300 clubs affiliated with the national association. As in previous conventions a series of sectional conferences lead by industrial and professional men uniquely qualified in each area, will be offered to those attending the convention.

Social Sciences To Be Featured At Lowell

The establishment of a new Department of Social Sciences and the consolidation of the Department of Textile Chemistry and Coloring with the Department of Finishing were announced recently by President Kenneth R. Fox in a series of basic faculty re-organizations at Lowell (Mass.) Textile Institute.

The Department of Social Sciences, said President Fox, will include all courses in psychology, sociology, labor relations, marketing, economic geography and similar fields, and has been created in recognition of the increasing importance of human relations in social and industrial activity. The emphasis of the new department, further stated President Fox, will be on an effort to cut across traditional lines

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of thinking and teaching basic economic subjects, social science, and history and to integrate the fundamental ideas from each field into courses of modern significance and current application. It is expected that students will obtain a clearer picture of comparative governments, mass production, and its relation to the growth of American industry, profit motives, the rise of the labor movement and the current picture of labor-management inter-relationships, and other equally important concepts.

Consolidation of the Departments of Textile Chemistry and Finishing, continued the statement of President Fox, was brought about by the rapid changes in both fields and the mutual contribution of each field to the growth of textile finishing technology. The grouping of these two departments will permit a much more effective design of courses to insure the students a complete course in textile chemistry, properly oriented to the swift changes being made in the field and the elimination of separate courses in the chemistry and mechanics of finishing operations.

Institute Undertakes Two Research Projects

The Institute of Textile Technology, Charlottesville, Va., has signed contracts with agencies of the Federal Government calling for further work on two research projects, it was announced by Ward Delaney, president of the institute.

One of these contracts, signed with the Office of Naval Research, Washington, D. C., calls for a thorough study of changes that occur in cellulose fibers when attacked by various fungi. It is entitled, "The Degradation of Cellulose Fibers Attacked by Various Fungi, with Especial Emphasis on Changes Occurring During the Early Stages." In the second of the contracts, signed under the Research and Marketing Act, the institute has agreed to make a study of cotton textile soiling. This project is being carried forward for the Bureau of Agricultural and Industrial Research, Department of Agriculture, Washington. Formal title of this contract is "Improvement of the Resistance of Cotton Textiles to Soiling."

Signing of these contracts will result in expansion of research work already underway at the institute in each of these two particular fields. Scientists at the institute began work on the projects some time ago, and the two governmental agencies, after reviewing the work and facilities at the institute, decided that research in these important fields should be carried even farther.

Three representatives of the General Electric Co. recently visited the Institute of Textile Technology to show members of the institute's research staff a film strip on the textile industry. The film, made from artist's drawings of scenes that later will be photographed and made into a color movie, depicted the various steps in the production of textile materials from the raw cotton to the finished goods.

The motion picture will stress the great strides being made in the modernization of the textile industry. It is being prepared as one of a series, "More Power to America," sponsored by G. E., and will be shown in textile schools, in various mills, and before other interested groups. It is scheduled for completion next Spring. Following the preview, the G. E. officials invited comment and criticism from the institute's scientists.

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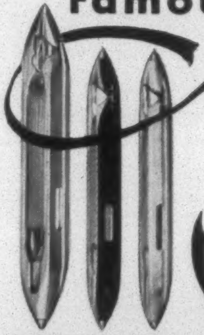

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June Cotton Spinning Activity Reported

The Bureau of the Census announces that, according to preliminary figures 12,779,000 cotton system spinning spindles were in place in the United States June 30, 1948. As of the last working day of the month 21,479,000 were consuming cotton, 1,308,000 were consuming other than cotton, and 992,000 were reported idle.

The total cotton system spinning spindle hours reported for June, 1948, amounted to 10,953,000,000, an average of 461 hours per spindle. For the month of May the total was 10,693,000,000, an average of 450 hours per spindle. During June, cotton system spinning spindles operated at 130.9 per cent of capacity based on an 80-hour week as compared with 134 per cent for the month of May.

Cotton Use Shows 11-Month Drop

The Census Bureau has reported that 801,142 bales of lint cotton were consumed during June, compared with 785,440 during May of this year and 729,412 during June of 1947. Consumption for the 11 months ended June 30 totaled 8,719,452, compared with 9,347,031 for the corresponding period a year previously.

Cotton consumed during June included: in cotton growing states, 703,819 bales compared with 693,917 in May this year and 638,181 in June of last year, and for the 11-month period, 7,685,286 bales compared with 8,187,328 in the corresponding period a year ago; in the New England states, 79,885 bales compared with 74,380 and 72,153, and for the 11-month period 833,531 bales compared with 900,493.

Cotton on hand June 30 included: in consuming establishments, in cotton-growing states, 1,419,938 bales, compared with 1,380,611 a year ago; and in the New England states, 263,919 bales, compared with 247,043.

1948 Cotton Crop To Be Larger

A 1948 cotton crop about ten per cent above last year's—but smaller than the trade expected has been forecast by the Agriculture Department.

Cotton in cultivation on July 1 totaled 23,653,000 acres, or 2,153,000 more than last year. This is slightly above the ten-year average.

While the department makes no official forecast of production, it said unofficial computations indicate a 1948 crop of 12,927,000 bales if the yield per acre remains stable. Last year's crop was 11,851,000 bales.

Long-Staple Cotton Quota Supplemented

The President has issued a proclamation permitting additional importation of long-staple cotton before the opening of the quota year Sept. 20 under licenses to be issued by the

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United States Tariff Commission. Under the proclamation licenses to import cotton having a staple of 1$\frac{1}{8}$th inches or more but less than 1$\frac{11}{16}$th inches in length will be granted to individual cotton manufacturing concerns only in such amounts as shall be determined by the Tariff Commission to be essential on the basis of information obtained by the commission from the concerns.

After a license has been issued importation may be completed by the licensee or through whatever trade channel he designates. Upon issuance the original license will be sent by the Tariff Commission directly to the Commissioner of Customs; through whom the administration of the customs clearance will be centralized. Each applicant will be advised by wire of any license granted and a copy of the license will be forwarded to each.

The maximum total additional quantity of cotton permitted entry before Sept. 20, 1948, under the proclamation is set at 18,000,000 pounds. The supplemental quota is in addition to the annual quota of 45,656,420 pounds, which has already been filled.

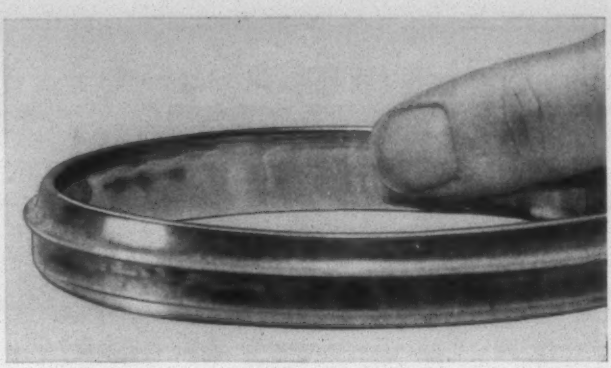
Promote Use Of Cotton Bags, Canvas Awnings

Half a million dollars for new cotton promotion work was appropriated in June, the National Cotton Council announced recently. This amount will be added to funds already being used to boost cotton products. Products to benefit from two-promotion programs which have been drafted by industry and council representatives are cotton bags, the fiber's second largest market, and canvas awnings. Of the $480,000 planned for the two campaigns, $300,000 represents entirely new activities and $180,000 is for expansion of activities already under way.

The program to defend cotton's bag market will have a two-way approach. First, an intensified campaign will be directed to rural areas to encourage the re-use of emptied cotton bags for sewing and other purposes. A parallel campaign is planned in metropolitan areas designed to promote markets among city housewives for bags emptied by industrial users and subsequently sold through retail outlets. Every available means will be employed to show housewives that cotton bags can be quickly, easily and inexpensively converted into attractive apparel and household articles.

The promotion of cotton bags will be conducted by representatives of the National Cotton Council, the Textile Bag Manufacturers Association, cotton weavers, commission houses, converters and finishers.

An entirely new sales program designed to increase the use of canvas awnings will involve an expenditure of $100,000 and is to begin in the Spring of 1949. Preliminary



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activities to this campaign already have resulted in the placement of several thousand mats with awning dealers in 43 states for local newspaper advertising. These advertisements are appearing now throughout the country.

The awning campaign will emphasize results of authoritative tests which have shown that canvas awnings are greatly superior to other window coverings in reducing interior temperatures. It also will point out the aesthetic advantages of canvas awnings and the extra life they give to window screens, sashes and frames as well as to air conditioning equipment. The canvas program is being sponsored by an institute advisory committee composed of large canvas producers and a representative of the council.

American Viscose Corp. announces that commencing June 1 it will be represented in Mexico by Blum & Cia., S. A., Isabel La Catolica 33, Mexico, D. F , for the sale of Avisco rayon yarn and staple.

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Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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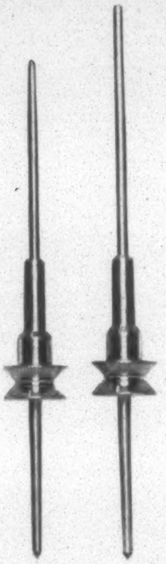

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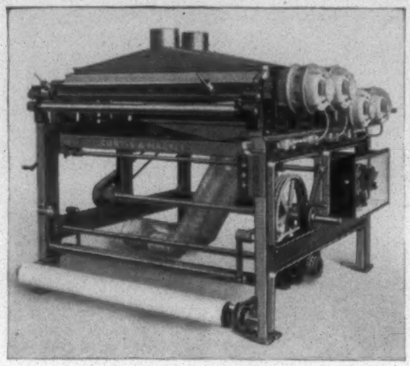

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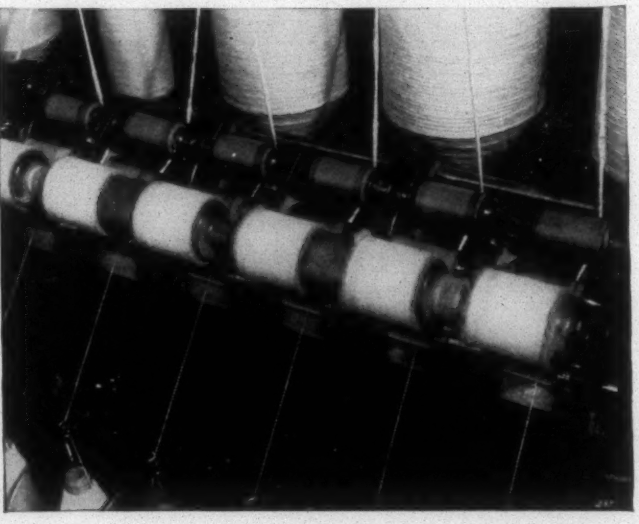

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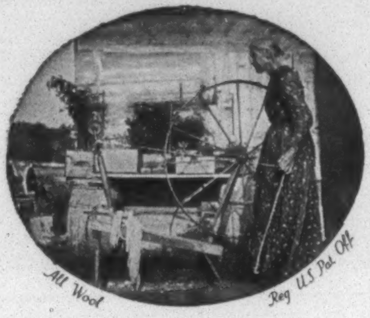

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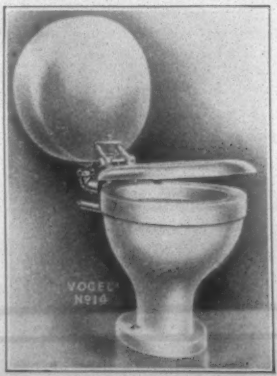

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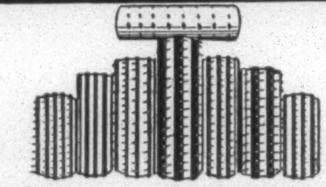

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WANTED—Position as Superintendent of Sewing Room, or a General Overseer of same in textile plant. References. Write "Sewing," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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WANTED—Assistant Overseer of Spinning, large Alabama mill.

WANTED—Assistant Overseer of Carding, large Alabama mill.

WANTED—Assistant Overseer of Spool, Warp, and Slashing, large Alabama mill.

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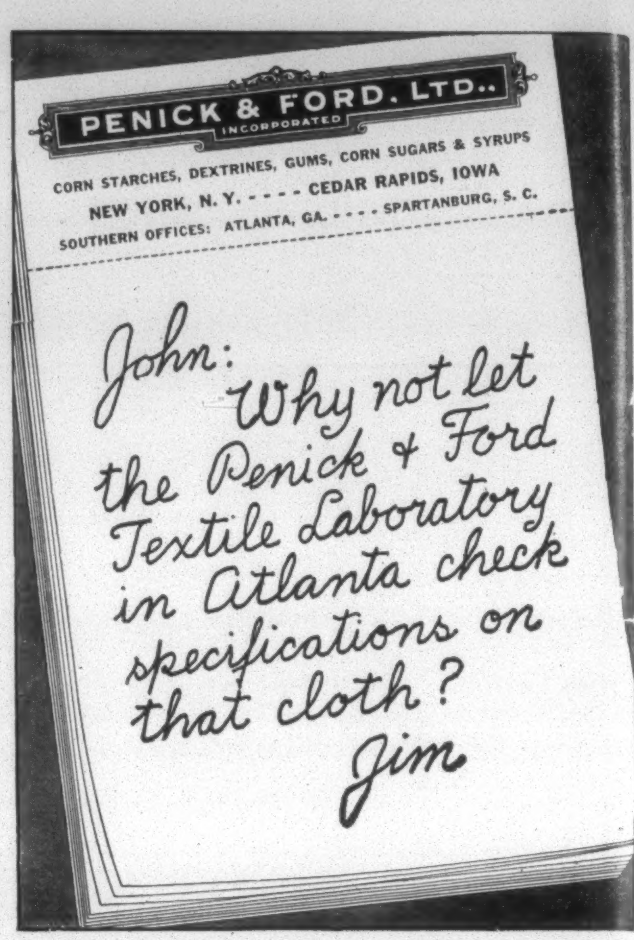

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Before Closing Down

— TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED —

MILL NEWS

INMAN, S. C.—The employees of Inman Mills were honored recently by plant officials upon completion of a perfect annual plant safety record. Award ceremonies and a barbecue were highlights. Robert H. Chapman, vice-president and assistant treasurer, was master of ceremonies at the event and James A. Chapman, president and treasurer, spoke. The safety award was presented by G. S. Cheasick, assistant vice-president of Liberty Mutual Insurance Co. and accepted by the employees' safety committee.

UNION, S. C.—An evaporative cooling system is being installed in the spinning and weaving rooms in the Monarch Plant of Monarch Mills at a cost of $116,000 by American Moistening Co. The cooling system, expected to be in operation within 90 days, will result in more comfortable working conditions and will give uniform atmospheric conditions necessary in the processing of high quality fabrics.

PEACE DALE, R. I.—M. T. Stevens & Sons Co. is planning to move the woolen section of its Peace Dale plant out of the state. Some months ago the worsted section of the plant was shifted to Rockingham, N. C. It is believed that the woolen section also will be sent South, but this has not been confirmed.

STONEWALL, MISS. — Lockwood Greene Engineers, Inc., Spartanburg, S. C., office, is working with Erwin Cotton Mills Co. of Durham, N. C., on the revamping and modernization of Erwin Plant No. 8, formerly known as Stonewall Cotton Mills. Edwin M. Holt, general manager of manufacturing for Erwin, states that the job of modernizing the plant will get underway immediately but because of the size of the undertaking and the tight situation in the machinery market he expects it will take about two years to reach the high degree of efficiency for which he is striving.

IVA, S. C.—A retirement plan has been placed in effect at the No. 1 Plant of Jackson Mills here and at the No. 2 Plant at Wellford, S. C. The plan covers employees with three or more years' continuous service, and the plan will be financed by deposits to be made annually to each qualified employee's credit when mill profits permit.

PERSONAL NEWS

F. D. Porter has been promoted from assistant superintendent to superintendent of the Jackson Mills plant at Wellford, S. C. Mr. Porter succeeds Marchant C. Cottingham.

W. Francis FitzGerald has been appointed assistant managing director of the International Wool Secretariat. Mr. FitzGerald formerly was assistant vice-president of the Emigrant Industrial Savings Bank, New York, and had had many previous years of banking and public relations experience.

Adam F. Mitchell, formerly vice-president in charge of production at Wilkes-Barre (Pa.) Lace Mfg. Co., has been elected president of the firm. Alvah Fassett, a director for many years, was elected vice-president.

Austin J. Bailey, who recently resigned as vice-president of Brookfield Mills, Inc., East Brookfield, Mass., is now associated with Holliston Mills, Inc., Norwood, Mass., as vice-president and assistant to the president.

Six additional recipients of four-year, $500-a-year scholarship awards have been announced by the Leon Lowenstein Foundation, Inc. They are Phyllis Collinge and Robert W. Mason of Rock Hill, S. C., Grace Sellers of Rockingham, N. C., Ernest J. Harris and Joel N. Hein of New York City, and James W. Cleveland, Jr., of Guntersville, Ala. All have a parent or other near relative employed by M. Lowenstein & Sons, Inc., or a subsidiary of the company.

OBITUARIES

Dr. William P. Jacobs, 54, of Charlotte, N. C., and Clinton, S. C., president of the American Cotton Manufacturers Association, died July 25 at a Washington, D. C., hospital as the result of a heart attack which he suffered on July 16 while in Washington on business for the association. Dr. Jacobs was a member of a family of distinguished educators, industrialists and Presbyterian clergymen. He was elected head of the A. C. M. A. in 1945, resigning as president of Presbyterian College, Clinton, as executive director of the Print Cloth Group of Cotton Manufacturers, and executive vice-president of the Cotton Manufacturers Association of South Carolina to accept the office. A man of versatile interests, he was president of Jacobs Press and of Jacobs sports magazines, including *Sportsfolio, American Lawn Tennis* and *Aim.* He was founder of the Clinton Building & Loan Association and owner of the Carolina Pharmacy Co. at Clinton. Since 1946 he had been chairman of the board of trustees of Presbyterian College. A noted sportsman, Dr. Jacobs was a former vice-president of the U. S. Lawn Tennis Association and former president of the Southern Lawn Tennis Association. He made tennis a major sport at Presbyterian College and his interest in football was evidenced by the Jacobs Football Blocking Trophy for South Carolina and Southern Conference performers. Dr. Jacobs is survived by his wife, two sons and two brothers.

Jesse L. Williams, 80, former superintendent of the old Pine Tree Textile Mill at Camden, S. C., now a unit of the Kendall Co., died at a Camden hospital July 26 after a brief illness. Mr. Williams is survived by three daughters and a brother.

George W. Dolan, 46, chairman of the board of Mathieson Chemical Corp., died at his home in New York City recently after a brief illness. He joined the Mathieson firm in 1930 and became manager of the carbon dioxide division. He was elected president in 1944 and chairman of the board this year. Surviving are his wife and a son.

EUROPEAN RECOVERY NEWS

In the first year of the $5,300,000,000 European Recovery Program, $1,324,300,000 worth of American and other Western Hemisphere products will be shipped to the United Kingdom. France will be the recipient of $1,130,800,000 while Italy's share will be $703,600,000. A new graphically

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illustrated chart issued by Dun & Bradstreet gives a complete breakdown of the amount of American dollars that will be allotted to each country sharing in the European Recovery Program. Based on U. S. State Department and E. C. A. sources, it shows that 54 per cent of the money will be spent on U. S. products, 36 per cent will be for purchases from other countries in the Western Hemisphere, while the remaining ten per cent will be for administering the program, as well as price adjustments, etc.

Raw cotton worth $511,300,000 will be shipped from the United States during the first 12 months of E. R. P. Europe also will receive $72,600,000 worth of cotton cloth, $24,600,000 worth of wool and $2,700,000 worth of cotton yarn.

A booklet, *American Business and European Recovery,* which outlines the operations of the Economic Co-operation Administration and the purchasing procedures of participating countries, has been made available to those interested. Explaining that E. C. A. is a financing agency and not a purchasing agency, the booklet points out that the American businessman's contacts should be with the foreign businessman, the foreign government and the export license office of the U. S. Department of Commerce. "After weighing the requirements of the participating countries, E. C. A. issues procurement authorizations to those countries," the booklet says. "The manner in which the participating countries make their purchases follows no set general pattern. E. C. A. is desirous of having purchases follow normal private trade channels to the greatest extent practicable." The booklet briefly outlines the buying methods of the various participating countries and lists addresses of foreign purchasing missions and embassies.

SCHOOL FUND REACHES $1,000,000

A personal contribution of $6,000 from W. J. (Nick) Carter of Greensboro has increased the total funds of the North Carolina Textile Foundation, Inc., to $1,000,000, Dean Malcolm E. Campbell of the N. C. State College School of Textiles announced at Raleigh recently. Mr. Carter, who is president of the Carter Fabrics Corp. of Greensboro and a vice-president of the J. P. Stevens & Co. of New York City, has served as president of the foundation since its organization in 1942. Funds contributed to the foundation are used in making salary supplements for research authorities and faculty members. At the request of the donor, approximately $5,000 of Mr. Carter's gift will be spent in equipping "a very attractive and comfortable" student lounge room in the center of the textile building.

Dean Campbell stated that both Carter Fabrics Corp. and J. P. Stevens & Co. have made substantial donations to the foundation in the past, but he emphasized that Mr. Carter gave a personal contribution to send the organization's total resources to $1,000,000. In making the announcement, Dean Campbell also reported that work will begin soon on a $700,000 building project. The construction work will increase the school's space for facilities and classrooms by 80 per cent.

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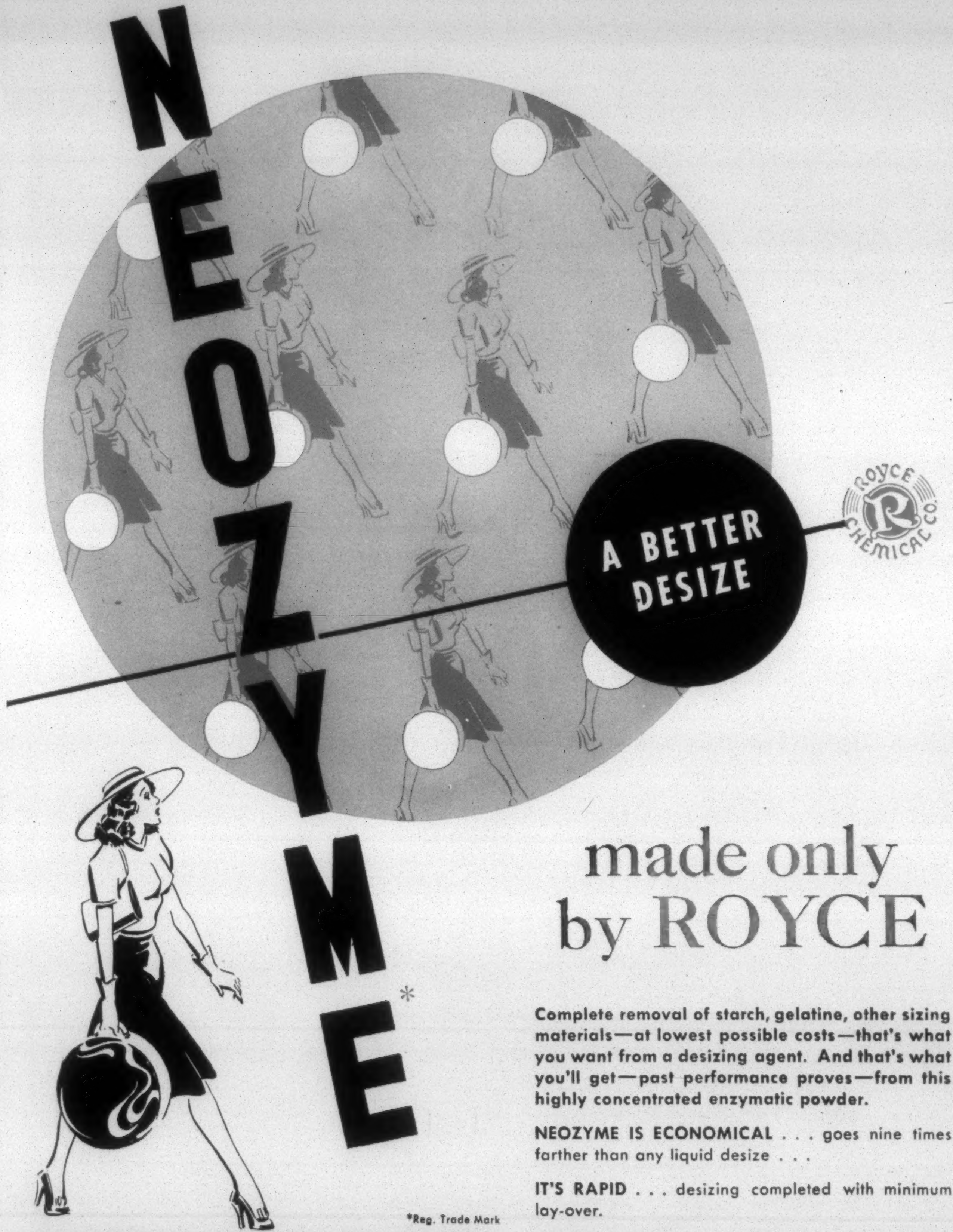

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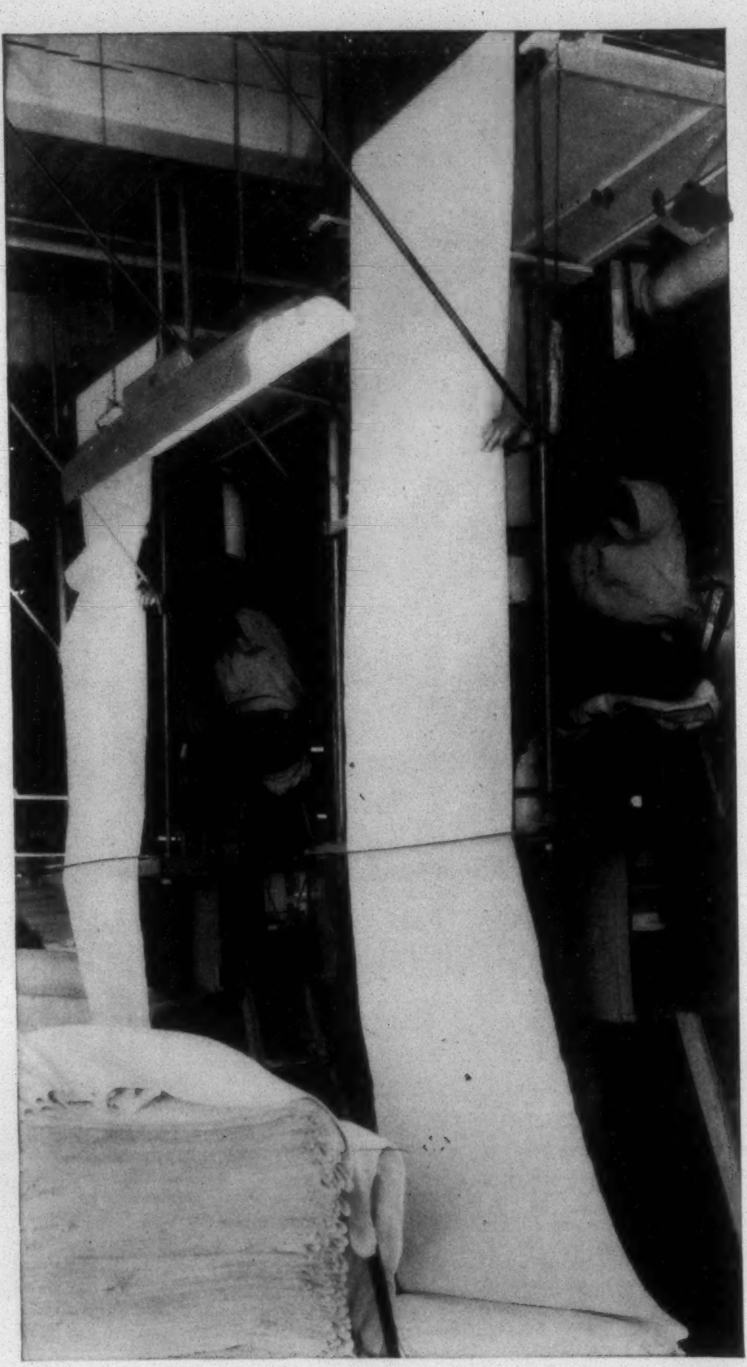

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